

GOVERNMENT OF INDIA
DEPARTMENT OF ARCHAEOLOGY
CENTRAL ARCHAEOLOGICAL
LIBRARY

CLASS _____

CALL No. **910.4096** **liv-wal**

Vol. ii

D.G.A. 79.

LOW-VAL D. OF OF

CENTRAL AFRICAN ARCHIVES

OPPENHEIMER SERIES

NUMBER NINE

CENTRAL AFRICAN ARCHIVES

THE OPPENHEIMER SERIES

Editor in Chief: V. W. Hiller, O.B.E., Chief Archivist

ALREADY PUBLISHED:

1. *The Matabele Journals of Robert Moffat: Volumes I and II*
2. *The Matabele Mission*
3. *The Northern Goldfields Diaries of Thomas Baines:
Volumes I, II and III*
4. *Gold and the Gospel in Mashonaland, 1888*
5. *Apprenticeship at Kuruman*
6. *The Zambesi Journals of James Stewart, 1862-1863*
7. *The Barotseland Journal of James Stevenson-Hamilton,
1898-1899*
8. *The Southern African Diaries of Thomas Leask, 1856-1870*

THE
ZAMBEZI EXPEDITION
OF
DAVID LIVINGSTONE

1858-1863

edited by
J. P. R. WALLIS

4589

VOLUME TWO
THE JOURNALS CONTINUED
WITH LETTERS AND DISPATCHES
THEREFROM



910.4096
Liv/Wal

LONDON
CHATTO & WINDUS LIMITED
1956

Ref 920.99104
Liv/Wal

*Printed for the Central African Archives
at the University Press, Glasgow,
and published by Chatto and Windus Limited
42-44 William IV Street, London*

Contents

JOURNALS (continued)

PAGE

Journal D. (30th October, 1861 to 8th December, 1862) - - - - -	213
Journal B.2 (19th March, 1863 to 12th July, 1863) -	228

APPENDIX:

Journal C.1 (23rd August, 1859 to 8th October, 1859)	245
Journal C.2 (16th May, 1860 to 17th May, 1860) -	249
Journal C.3 (18th May, 1860 to 1st June, 1860) -	250
Journal C.4 (11th June, 1860 to 26th June, 1860) -	252
Journal C.5 (28th July, 1860 to 23rd August, 1860)	256

DISPATCHES AND LETTERS:

(22nd March, 1858 to 22nd June, 1858)- - -	263
Journal A.1 (31st July, 1858 to 14th February, 1859)	272
Journal A.2 (4th March, 1859) - - - -	306
Journal A.1 (25th March, 1859) - - - -	308
Journal A.3 (12th May, 1859 to 9th December, 1859)	315
Journal A.4 (20th November, 1859 to 5th July, 1864)	340

LETTERS OF INSTRUCTION - - - - -	411
BIBLIOGRAPHY - - - - -	436
INDEX - - - - -	437

CENTRAL ARCHAEOLOGICAL
LIBRARY, NEW DELHI.

Acc. No. 4589

Date. 9. 4. 56

Call No. 910. 4096/Liv/wal.

Illustrations

from watercolours by Thomas Baines

WORKING COAL NEAR TETE	- - -	<i>Facing page</i> 238
CEREMONIAL BURIAL OF CHRIST ON EASTER SATURDAY. PROCESSION LEAVING THE CHURCH AT TETE, 1859 -		254
CEREMONIAL BURIAL OF CHRIST ON EASTER SATURDAY. PROCESSION OUTSIDE THE CHURCH AT TETE, 1859 -		286
KROOMEN OF THE <i>MaRobert</i> CUTTING DOWN A PALM TREE FOR FUEL, 25 July 1858	- - - - -	302
SUGAR MILL IN PIECES, KATIPO'S ESTATE, ZAMBEZI RIVER, 27 JULY 1859	- - - - -	334
MANUFACTURE OF SUGAR ON THE KATIPO ESTATE, ZAMBEZI RIVER. GENERAL VIEW OF THE PROCESS	- -	350
BLACKSMITH AT WORK	- - - - -	382
SPINDLE AND BAG OF PALM LEAF FOR HOLDING COTTON, USED BY NATIVES ON THE ZAMBEZI RIVER, 7 SEPTEMBER 1858	- - - - -	398

Map

ROUTES FOLLOWED BY LIVINGSTONE DURING THE ZAMBEZI EXPEDITION	- - - - -	<i>at end</i>
---	-----------	---------------

THE ZAMBEZI EXPEDITION OF DAVID LIVINGSTONE

Journal D

Other note book full.

30 Oct, 1861. Landed at village called Mikeno this morning. As we have its latitude and a set of altitudes, will connect these observations with those taken on the discovery of the Lake. Took Alts of ☉. Sextant reflects from surface of glass of reflection as well as from quicksilver above 100°. When we had breakfasted some people ran past from a crowd of Ajawa we had seen a mile or so above, saying that they had just killed a man. We crossed to West bank to ask, and found that this party is on its way to the bishop's place: four or five muskets formed the advance guard. We did nothing.

There is another party nearer Zomba. If anything is done it must be a thorough sweep of them. The bishop does not realize his position, as he intends leaving his most important post at this critical time to bring up his sisters! He seems to lean on them. Most high church people lean on wives or sisters. Kalongere, the most powerful chief here, is gone, it is said, to consult the English. If taken by the hand now, the mission would gain in influence immensely, but 'veremos', we shall see. I hope the bishop will remain at his post; if he doesn't, he is a muff to lean on wife or a sister. I would as soon lean on a policeman.

We came down to near the uppermost cataract. Rain threatens. It usually begins when ☉ is right overhead.

1st Novr. Slung the boat up on a fine shady Moshoma tree. It is about 10 feet from the ground, but elephants abound, and may rub their backs on it: buried anchor, stanchions of awning and sounding lead in an old ash heap about 15 yards South. Got people there to carry our things on to Pamofunda. Sun very scorching, but thunder clouds travel about. Gave a cubit of calico to each carrier. All returned highly delighted therewith.

2 Nov. On to a point 1' below Morewe cat[aract] and 2' above Tette D[itt]o. Spent Sunday, 3d Novr, here.

4th. On to a village near to where we got 2 Potami¹ in going up. Thunders every afternoon.

¹ Hippopotami.

5th. To a village about opposite our Lat[itude] below Pampatamanga on other side.

6th. To village about opposite Tette vil[lage].

7th. At 9-30 A.M. to first cataract Mamvira. Send down for boat to Dakanamoio Is[lan]d. Heavy thunder shower yesterday evening. Shiré a little discoloured.

The following letters, covering the period from August 21st to December 18th, 1862, are, with the exception of one to his father-in-law, addressed to his children. Besides describing his trip up the Rovuma they show how the loss of his wife had brought him not only into more direct but into warmer relations with his young family.

David Livingstone to William Oswell Livingstone¹

H.M.S. EXPLORING SHIP, *Pioneer*
21st August, 1862

MY DEAR ZOUGA,

. . . I see that you remember the dates of the departure of the mails and have written monthly. We seldom get letters or send them away, for no monthly mail comes to our quarters; but if you write as often as you can I shall send you as much in return as all you can write. I thank you for your kind birthday present and for all your good wishes. I have sent some little things in a box which will be opened by Sir William Hooker at Kew and the packet sent to Agnes. You may consider what is sent to you as your birthday present, though I don't know when that is.

We are now at sea in the Mosambique channel, going to Johanna and the River Rovuma. We steamed off Kongone to get away well from the land; then, our wood being but small, we set sail and kept the fuel for worse times. But the wind was against us, or from the North-East. If we went one way we should have gone into Quillimane, so we went the other, and were fain to go away far to the South-East. When about mid-channel we had a fine breeze from the south and went, as we thought, sixty miles to the North, but next day we found by the sun and chronometer that, while sailing briskly one way, the current in the sea had been taking us faster

¹ William Oswell Livingstone's nickname remembers his birth-place beside the River Zouga or Botletle flowing into Lake Ngami from the east.

in another. We were twelve miles South-West of where we had been the day before when the wind began to blow from the South. Indeed the current had been flowing at the rate of 72 miles a day. Last year we met an East Indian ship near the same spot which was carried by the same current 40 miles a day. We were then becalmed and, knowing, though we could see nothing, that we were still gliding away where we did not wish to go, we got up steam and steamed East till we knew that we had crossed the current. We have¹

David Livingstone to his Mother

JOHANNA, 30 Aug. 1862

MY DEAR MOTHER

We came to this island a few days ago, and have an opportunity of sending letters, so I write, though I have not much to say. We are on our way to another river called the Rovuma, by which we hope to find an outlet to those discoveries which we have with so much toil effected. We wish to be away from the Portuguese, who are inveterate slave traders and turn all our labours to the forwarding of this horrid traffic. We mean to explore Rovuma in boats, and in December next return to place the Lady Nyassa on the Lake of that name. The mission established by the High church party may yet do good, but they have much to learn. I wish them every success, but it may be better to stand less in contact with them than I have been, as any blunders they make are put on my shoulders. The Portuguese would like to worm them out of the country by their slaves, while they² remain in the background. I lately called on the Governor of Tette to prevent a private Portuguese who had armed a large party of blacks and waged war, from disturbing them, and he has acceded to my request.

We had a great deal of fever, in consequence of being long down in the lowlands and exposed in a way I never contemplated for dear Mary. The man, whose culpable negligence did it all, had had fever himself and was jaundiced, but was saved at death's door.³ We can cure it in general very quickly, but sometimes it resists all our efforts. I have written to Oswell by this occasion, but fear I may not be able to do so to Agnes and Thomas. With kindest salutations to my sister and to you, my dear mother and to Anna Mary, I am ever affectionately

DAVID LIVINGSTONE

¹ The rest of the letter is missing. ² The Portuguese. ³ See below, p. 222.

I think it may be better for Robert to come out here for a while. I thought education the best legacy I could leave him, but so thought not he, and must rank in life accordingly.

Johanna, 21st Octr.

P.S. We went up a few miles after coming back to the ship to get ebony, which grows abundantly on the Rovuma, and, when returning, I saw a hippopotamus put his head up right in our way in a narrow channel. Several others were a few yards to the left and I said to Dr Kirk, 'That fellow seems waiting for us'. The boat went right over him and he put up his head a few yards behind us, then in¹ under us, and lifted a big boat with ten men and about a ton of ebony in it, giving it two tremendous bumps. As the water began to flow in, we ran over to a sandbank with her, to see what damage had been done. The beast followed and Dr Kirk put a bullet into his ear, which probably gave him the ear-ache. We found that he had tried to bite the boat, but it was too broad and slipped out of his mouth. The tusks cut some planks like a chisel and made some holes besides. We went next day, thinking to get his head for Mr Fitch, but he had left that part and all his worthy family had followed him. We made some repairs in the ship, then steamed over to Mohilla in two days and yesterday, 20th Octr, came to Johanna, whence this will be sent by a dhow owned by a Malagasse man to Mayotta, and I hope it will reach you safely.

DAVID LIVINGSTONE

David Livingstone to Agnes Livingstone

JOHANNA, 1st Sept, 1862

MY DEAR NANNIE,

I was doubtful somewhat whether I would be able to write by this opportunity. We came over from Zambesi in 17 days and then from the town on the North side of this island to this, the South side or Pomony bay, where there is a depot for navy provisions. We gave the king of Johanna a passage, as he wished to see the consul, Mr Sunley. When we arrived I told Mr S. that I had brought him 2 boxes, a barrel and a king. He is a young man, speaks English and is a firm believer in Mahomet. He thinks it better that the heathen be left pagans than be made Christians, and gets over the old Testament by saying that the Jews altered it, and only Mahomet's book is true now. Referring to a saying among them that at the end of 22 years all will be of one

¹ So in the original.

faith, I said I hoped he would be a christian then. 'No,' said he, 'all will be Mahometans'. They are very proud and think no one can come near to them in argument. When a little posed with what was put to him, he called for the aid of the Kade—judge—who was also on board. They don't seem to feel the need of a Redeemer for their sin-laden souls.

Mr Sunley makes sugar here and we saw the whole process.¹ . . . between rollers and the sweet juice flowing into pans under which there are fires. Then, as it thickens, it is led over from one to another, to the last of five and, when thick enough, put into flat boxes to crystallize. Some juice is put into a machine which revolves very quickly and, by what is called centrifugal force, is thrown through a fine wire gauze screen in the side, which screen keeps in the sugar in a thick mass. A ton and a half is made here in one day. The cane of sugar cut in the morning is packed in bags at night. This may not be interesting, but it is the first that comes into my head. The Lord bless you.

David Livingstone to Thomas Livingstone

ROVUMA BAY, [?10]th Octr., 1862

MY DEAR TOM,

We have been up the Rovuma 114 miles in a straight line from the coast but 156 by adding the Latitude and Longitude together, and, having given Oswell an account of our voyage up from Zambesi to Johanna, I now give you some information about our trip up this river. The Orestes, a fine big Man of war with 21 68-pounder guns, came to Johanna as we were about to leave for this coast, and Captain Gardner very kindly offered to tow us over and thereby save our coals for our return. She walked along with the Pioneer as if she had nothing behind her—Up and down over huge waves, for it blew very fresh. Poor little Pioneer had to tumble and tear along till, snap went a cable as thick as your thigh, and we had to get up steam on our own hook and soon came into this Bay. Captain Gardner went up with us for two days, to see us fairly started. He turned at a little Lake called Chitia, about 3 miles long and one wide. It lies among the hills and, before parting with our good friends, we walked up to see it and some ebony trees which we needed. I saw some bits of fossil wood lying on a sandstone rock. This we know as a sign that coal lies beneath, and having said so, was rather glad when a few days afterwards I

¹ Part of the letter is here cut away, evidently the first part of the description of the sugar-making process. On the other side was Livingstone's signature.

found bits of coal in the sand in the bed of Rovuma. The people knew that it would burn, and said it came down with the water, but they knew not whence.

While we were up the hills looking at the Lake a [petty] officer said he had been fired at by the natives three times. We did not believe it, as they seemed quite friendly and we were equally so with them, but set a guard. On proceeding farther up we spent Sunday on the North bank and, an old man having come to us and understood that we were quite friendly, lots of people visited us. In the afternoon I walked up to their village but found them very much alarmed. They shewed no surprise at our worship, and we could make ourselves but little understood, as the language differs much from those on the Zambesi; but seeing women and children all fleeing, I called to a man not to fear, as I was only looking at the country. He asked if I would drink, and brought me a cup of native beer. There was much cultivation, though the country was covered with thick forest and brushwood which has always to be cleared away. Above this we found people living on sandbanks in the River. They have villages on the land and plenty of corn stowed away in the woods, but are afraid of being stolen themselves. Stealing and selling each other seems the only trade they have. In one village there were two human heads cut off: they tried to induce us to land among them: but when we stopped it was only to make purchases and go on. At last a large party followed us, evidently bent on mischief, but we were kind to them and paid them well for dragging one of the boats a short distance. At a narrow part, where the passage comes close to a high bank, they began to shoot their arrows on us. We stood and expostulated with them a long time and, having induced them to come to the boats, gave them over thirty yards of cloth as a token of friendship. They repaid our kindness by telling us to go on and at [word illegible] firing a volley from muskets and bows at us. Four bullets went through the sail of my boat. They evidently expected that we should run away and, when we did not, they did, and on our return we only looked at each other.

They had no cause whatever for wishing our blood: 'We won't let white people go up this river'. They [are] a lot of river pirates, and as soon as we passed them, all were friendly, and much trade is carried on by means of canoes. Seven canoes went with us three days. They come down to buy salt with rice. I was glad that we used every means in our power to avoid collisions, but see that slave stealers are bloodthirsty murderers.

The river has a tableland on each side, which looks like hills 500

feet high, till we get up about 50 or 70 miles. We then leave the hills and have what seems a large plain with small granite hills in front. This continues till we come among rocks in the stream with numerous passages between. Through them small canoes pass with ease, but our boats would have been smashed had we gone on as we intended. We were informed that about 30 miles in front the Rovuma is joined by the Liende, which comes from the hills on the East edge of the Lake. The Rovuma comes from the [*word illegible*] but is narrowed by rocks. Our object in coming was to ascertain if this river allowed another outlet from the Lake region than that to which the Portuguese lay claim. We found the river unusually and excessively low. Tsetse abound, but could English men be established on Lake Nyassa, they will undoubtedly prefer carrying their commerce out by this outlet to paying dues to Portuguese for the Shiré and Zambesi, which they now virtually blockade. . . .¹ This looks more healthy than any we have seen. The rocky tableland I have referred to rises from the banks, though sometimes there is a mile of fine level alluvial soil between. . . .² the people of the Shiré who were more alarmed when we first came than the Makonde of Rovuma were. To leave them now would be just leaving them to be eaten up by the slave hunters. We propose therefore to go back and put Lady Nyassa on the Lake by way of Shiré, which is much [*?more*] our country than it is Portuguese. In that land too the remains of dear Mama rest. Her body consecrates that soil and³ will always be interesting to us. She died in the cause to which our lives are consecrated. It took us 15 days to go up and 10 to come down. We know but little more than the river. The people cultivate oil seeds largely. They put hives on the trees as at Loanda and honey is plentiful. Cotton is cultivated and ebony abounds. Their clothing is very scanty, and calico is in great demand. At our furthest point, and at another part of the way, we came to the slave route from the Lake to Quiloa (Kilwa). There an English merchant might introduce lawful trade with advantage to the cause of humanity, if merchants would try and direct their trade so as to produce the greatest amount of good.

Your friend Mr Rae had to turn back with Captain Gardner from a little illness. We had fever in our party, but it did not last long. The trip gave a month in the boats. We never stopped except Sundays and one half day, and came back pretty brown

¹ *An illegible phrase*: almost . . . trade.

² A strip is cut out for the signature on the other side.

³ So in the original.

and tired. You will let Agnes, Robert and Oswell have the reading of this, but I don't like many people to see my letters. I shall write to Agnes next, but it will be a good while before I can give an account of our operations at Nyassa. We shall go back to Johanna Mohilla and then to the Zambesi. Captain Gardner wished me to meet him at Mosambique on New Year's Day, but I hope to be in the Zambesi then. God bless and guide you.¹

David Livingstone to Agnes Livingstone

ROVUMA, 10th Octr, 1862

MY DEAR AGNES,

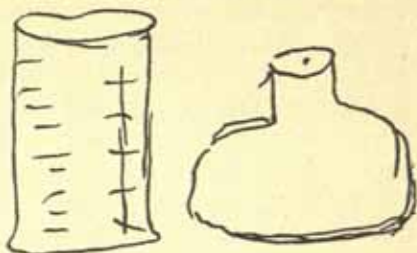
I have sent an account of our trip up the river to Tom and requested him to give you a perusal, so I need not say much to you. We were away from the Pioneer a month and worked hard every day except Sunday. Very glad to get back again, for sleeping night after night on a plank boat, though nice at first, becomes tiresome. Our food was plentiful, but it was an everlasting boil, boil, boil, till Dr Kirk shot two geese—big black fellows that made our mouths water with the hope of goose. Every one ran for wood, and the sailors stuffed one with salt pork and biscuits soaked in water! A fire was made that would have done for an ox. I had just time to walk off and have a bath when 'Dinner is ready, Sir', was the signal to unbutton my waistcoat, had I worn one. One of the seamen, who superintended the roasting, said, 'It may not be ready about the legs'—and we found the outside charred, the inside raw and bloody, the stuffing only a little warm. A second time it went to the fire and, when that too would not do, we had a laugh at the sailors trying to fry it with lumps of fat pork. The next day a better goose was no better stewed, so we came back to our boiled chickens with less disposition to grumble. There never is bad but it might have been worse.

Captain Gardner went up with us about 30 miles and he remarked how much more promising a field for missions this river presented than the west coast. It is more healthy looking by far, but there is a good time coming yet for Eastern as well as for Western Africa, and it may please God to make us pioneers for his great work. The ladies have enormous lip rings and, when I offered to buy one, the idea seemed so ludicrous she nearly fell down laughing. If I had asked her to sell her head she could not have thought



¹ The signature is cut away.

it more ridiculous. On the south side of the river, the men too wear the ugly ornament. The women are frightfully naked and all seem to live in fear of being stolen. We were near the slave route to Zanzibar along which 19,000 slaves pass annually. They were more afraid of being stolen themselves than of their property, for we saw their grain piled away in the woods while they had lived on sandbanks in the river. One night we slept near to a large quantity in corn safes made of the bark of trees and in pots plastered over with clay. The safes were made of the bark of very large trees and hives of the same form are put on . . .¹ secure honey.



We go back to the Zambesi in a short time. I miss dear Mama very sorely; she is often in my thoughts and so are you all. . . . As you usually tell me about the weather, I may say we had our first shower this season the day we came near the coast. It is getting very hot and will soon be roasting.

David Livingstone to Robert Moffat

JOHANNA, 25th Octr, 1862

MY DEAR MR AND MRS MOFFAT,

The arrival of the Gorgon and your letters shewing that you were still ignorant at the time of writing of my sad bereavement made my sorrow burst forth afresh. We have been up to Rovuma about 150 miles and the active life that implies had diminished in some degree the pain which daily visits to the grave kept up, but reading your letters and some from the children to their 'Darling Mama', with the kind condolences of the officers who knew and respected her much, gave pain which no one but those who have passed through the trial can conceive. Some regrets I cannot get over. I felt her to be so much a part of myself that I felt less anxiety for her than I have done for worthless blackguards like B. She seemed so strong too—I never saw her look better; she got over some slight touches so easily. If my fears had only been excited I would have brought her over here or sent her down to Natal. The officers of the Gorgon would have done anything, for the other ladies disgusted them by requiring so much to be done for them. Poor young Mrs Burrup's case affected her

¹ A part of the page torn away, perhaps for the signature on the other side.

deeply and she would take her head on her bosom and comfort her like a child. They lived in a tent on deck and the officers soon saw where sympathy was afforded, and when Mrs B. commenced her crying one soon went down and called Mrs L. That long detention in the lowlands we never contemplated. The Engineer whose negligence entailed it on us was himself at death's door and like poor dear Mary had the vomiting which is so baffling. I put a blister on his stomach and it filled with serum as black as bile. 20 grains of calomel relieved him when all jaundiced. I may be blamed for letting her come, and I blame myself very bitterly, but there were reasons which seemed at the time good and our separation was wholly unanticipated in 1858. I shall do my work while I am spared as well as I can but the future looks all different now. The prospect of having a home was ever in view since we were cast adrift by the Boers at Kolobeng. That vision is now dispelled and it is probable I may fall in establishing a new system in that great centre of slavery, Lake Nyassa.

When we had gone up in 2 boats about sixty miles of the Rovuma we came to the people called Makonde, living on sand banks for fear, they said, of being stolen and intent, we thought, on stealing others. Two human heads cut off in one village made us wary in landing. We had got on well with all till then. A party followed us till we came to a narrow passage under a high bank covered with long grass, bushes and trees, and began to shoot their arrows at us. We were quite in their power but stopped and expostulated as well as we could for a long time and even allowed three to come on the sand bank behind us, *thula-ing* with their bows and arrows. Some were at length persuaded to come to my boat while the others stood a little way off in case of a sudden assault and plunder of our goods. 'No man has ever gone up and you shan't begin', was the asseveration. Making friends, as we thought, and even knuckling down so far as to pay them 30 yards of calico seemed so much preferable to a collision that we were thankful. We explained the superiority of our firearms, revolvers, etc., and told, as well as our interpreter could, how easily we could disperse them, but we feared God and never fought unless we were attacked. Now we were to be friends, etc., and, as soon as we began to move on, received a volley which left four bullet holes in my sail. All bolted in a moment back among the bushes except two, one preparing his musket to fire, and the other with bow bent. They received the return fire from the boats. They had expected to kill some of us and in the confusion we might run and let them plunder the boats, and, as we did not flee, they did. And we came through the same people on our return, they looking

at us and we at them, and, as I now believe that those murderers who engage in slave-stealing real[ly] acquire a taste for blood, we would not have risked our lives again in long fruitless palavers. By doing all we possibly could to prevent fighting, they will understand that we have no hostile feelings, and probably no English boat will again be molested.

Above them the people were all friendly, laying down their arms before coming to the boats and here a great trade was going on by canoes in rice and salt. At our turning point which, though 156 miles up the river, is but 114 as the crow flies, the bed of the river becomes rocky and the water comes through a number of channels amongst huge stones. The banks are quite level and canoes pass through with ease; but our boats, though they might be drawn up, would have been stove in coming down.

30 miles above that, the slave-trade routes from Kilwa (Quilwa) and Nyassa crosses Rovuma, and the ford there, near the junction of the Liende, is said to be ten days from the Lake. For eighty miles from the sea the river has apparently ranges of hills like those west of you, but they are only the edges of a plateau, pretty densely wooded with trees, bushes and bamboos. Then these highlands retire and leave an extensive plain dotted over with granitic hills in front, and this continued as far as we could see. Pieces of coal shewed the mineral to exist up there. Land fertile, grain abundant, but people all afraid of being stolen.

Language of same class as the Zambesian but much more guttural. *Basi* on Zambesi is like the Sichuana *Nela*; it here becomes *bage*. *Madzua*, suns, becomes *Maduha*. *Matsai a Koku* becomes *Mae a noku*, etc.

Muskets plentiful: one man offered a good one to us for 24 yards of calico. The Tsetse is the worst thing about the river. It was very low, but a vessel drawing 18 inches when loaded could trade 6 or 8 months of the year and back twice in each trip on the Keelwa¹ slave route. In spite of all disadvantages, should lawful trade flourish on the Lake, it will be preferred as an outlet to paying tribute to our Portuguese allies who have established a sort of paper bloc[k]ade of the Zambesi.

We were wearied and worn by our long stay in the lowlands and, having come to the mouth of the Luabo, took a run over here rather than spend our time in wending up a low river. I have finished the exploration of Rovuma without losing any time, for the floods begin next month.

Anent our doings of which I wrote you some account from

¹ Elsewhere spelt by Livingstone Kilwa or Quilwa.

Murchison's cataracts, I may give, as private information only, that Earl Russell read the same with great interest, etc., and laid it before the Queen, and he heard with deep regret the proceedings of the Portuguese and had instructed our minister at Lisbon to make a strong representation to the Government, etc. There will be something in the upshot. Lord Russell is pressing on the suppression on the east coast with greater vigour and the Sultan of Zanzibar will have the slaving in his name curtailed. The Gorgon went off last night quite eager and, if I mistake not, Captain Wilson will give the stream of slave dhows from Quiloa to the Red Sea and the Persian Gulf a check this year the like of which will puzzle the memory of the 'oldest inhabitant'. This, you will perceive, will smooth our path on the Lake, whither we go as soon as we have provisioned. The difficulties we anticipate as the most formidable are the proper management of the large body of people who will soon gather around every location we may choose. At Magomera about 200 people, most of them from us, were allowed to deposit all about the place and no scavenger beetles had philanthropy enough to aid in cleansing the air. The consequence was this cess pool became, in the language of the missionaries, a 'pest hole'. Food was bought regularly, whether needed or not, and all the rats in the parish—or diocese—came to share. The surplus in the country was brought up, and then came hunger, ulcers, dysentery and death. They were *going* to move, as the spot had only been pointed out as a temporary residence, till a better should be selected: but the grass had been burned off and new huts could not be built till it grew again. The venerable Dr Pusey says that 'not even defensive warfare is lawful, for it prevents a missionary getting the martyr's crown. Suffering, not doing, is the rule for missionaries'. Here then was 'suffering, not doing', breathing fetid effluvia, and, when the heavy rains descended and washed their deposits and that of thousands into the streams around them and above their drinking magalamkapaaa, and over thirty natives became martyrs, or rather, easy victims, to their own abominations.

David Livingstone to Agnes Livingstone

SHUPANGA, 18th Decr 1862

MY DEAR NANIE,

I received your welcome letter of 28th March and 3rd May on our arrival here yesterday, having previously got two of a later date giving an account of the Great Exhibition while we were in the River of Quillimane. Your letters and visiting the

grave where I have again been to plant some Australian gum trees awakens my sorrows afresh. . . . I got a letter from some Makololo yesterday: it was written for them by Mr Scudamore. They say, 'We weep because Jesus has taken away our mother'. They are up here, not having gone home when I sent them, and they have taken charge of the country doing what they like and calling themselves Englishmen.

I gave Oswell and Tom an account of our voyage to Johanna and up Rovuma: I shall now give you a continuation. I forget whether I told Tom that when we were in tow of the *Orestes* the cable, as thick as Oswell's leg above the knee, snapped. In this case the end carried away a house on the deck. That is a magnificent ship. When the natives from the *Pioneer* went on board to see her they shrank down at the gangway in awe of the great space before them on deck with 21 huge guns each to throw a ball of 68 lbs and the enormous masts towering higher than any tree they ever saw. This single cruiser costs twenty-five thousand pounds a year, and this is but one of some hundred of men of war our great country possesses and occasionally employs. Here many are employed at enormous expense to put down the slave trade. This plan was begun by Lord Palmerston whose name will be held in everlasting remembrance. People told no end of stories to throw discredit on his policy and they did it so plausibly that I formerly believed them, and got a lesson never again to give implicit belief to every thing till I have been to the bottom of it. It was said the English cruisers, by interfering to put the slave trade down, very greatly increased its atrocities and, notwithstanding the expense, this traffic flourished brisker than ever. When on my way across the continent I was surprised to hear people speak of the time of the slave trade as a time passed by—'such a one was rich', said they, 'in the time of the slave trade, he is poor now', and go on asking what influence repressed it, the reply was, 'The English men of war', the same people would at other times utter the fallacies that they only made it worse, etc.—but how make it worse when it is much checked? It then appeared that these statements had been invented by slave traders and retailed and believed in by those who had no means of getting to the truth of the matter. I think that our nation is doing what procures it renown to all coming generations.

We now go up to try and do something to stop an annual flow of some 20,000 slaves from Nyassa to the Red Sea and Persian Gulph. This, though a prodigious number, is nothing compared with what was the case formerly.

Well after this long digression I may say that when at Johanna we went up to see a small Lake which may have been the crater of a volcano. It is regarded with superstitious dread by the people. It was a very steep climb at some places, but shady from the mountains being covered with wood. There are tree ferns 20 feet high and great numbers of smaller but beautiful ferns. The Lakelet is no great thing but there are birds on it called grebes which, you may have forgot, Sechele and I shot on our way with you to Lake Ngami. They have curious little feet set so far back on the body and each toe with a web sideways,¹ that they don't seem capable of walking. How did they get up there? We would with difficulty get up there on all fours. They have mere rudiments of wings and never can fly. When a boy, I asked a quarryman who was working in a limestone quarry with plenty of shells how they got there, 'He who made the rocks made the shells in them'. After various wise conjectures we had to say we don't know how they got up there. But there they are, and Uncle Charles shot and stuffed two.

I ought to have mentioned that we left Rovuma without noticing that it was Friday. When we came near Mohilla in a fine calm night, so as to see it we stopped, so as not to be in danger of rocks. Some of the sailors were heard growling 'Didn't I tell you that, sailing on a Friday?' but what *that* was, I don't know. These superstitions are like the divination of the natives if anything happens to coincide with the event expected: it is carefully noted. If it fails, nothing is said about the affair.

In coming back two men of Johanna, one called Prince Mahomet—a gentleman—the other Abadoo, a fellow educated by the missionaries at Bombay, had formerly gone about various parts, begging, as 'a Colonel of the Army of Johanna'. He was, I believe, baptized, but is now Mahomedan and had prevailed on the other man to flee with him as if in danger of his life by the King of Johanna. They came on board Pioneer for protection, but the consul said there was no necessity: Abadoo was only making a tool of him. So I told them to go to the consul's house. They got into their small boat and went off to Mohilla, and may go to Mauritius, or England, if they can. Of those educated by missionaries some turn out well, other receive all the temporal advantages of education and turn it all to evil. It is so all the world over, and everyone has some chance in life. Those who improve it succeed in life: those who neglect these chances or turn their advantages to evil become miserable wrecks. They live dishonoured and die unlamented. We saw them next day in their little boat inside the reef, and it was

¹ Livingstone gives a rough diagram too vague to reproduce.

too rough a sea for us to land without danger, so we steered away across to the African coast.

We go over that way instead steering away straight for the Zambesi, to avail ourselves of a strong current in the sea which, when we stopped steaming and had a slight wind against us, carried us south at the rate of sixty miles in 24 hours, or about as fast as you could walk. 'Aye, ye mauna try to come o'er us that way. Ye ken weel eneugh, Captain, there are nae currents in the sea', is said to have been the sage remark of a Scotchman to a Captain who was chafing under the irritation of being carried helplessly in a sailing vessel away from his port. . . . We were carried South in the easy way by the current till we were opposite Kongone and then steamed into the land; but our coals were done when we were only 30 miles from our port and, the wind being against us, we turned back and sailed away to the river of Quillimane, to cut wood. There H.M.S. *Rapid* called and gave us a mail. She brought lots of provisions for the Mission of the Universities. We helped them by towing the provisions across the bar of Quillimane and then, with wood, steamed back to Kongone, a distance of about 50 miles. The grass had been burned off and we got plenty of fresh meat from the antelopes which abound at all seasons, but when the grass towers above our heads we cannot see them. . . . At Mazaro we met one of the missionaries, Mr Procter. He had come down for provisions, as there is a famine up Shiré, the result partly of drought and partly of slave-trading. . . . Some time ago a London missionary, after reading my book, got five Scotchmen—2 carpenters, 2 masons and one smith—to come out and join me. They work at their trades and the wages go to a common fund. They had bought 2 waggons, intending to go overland, but the Governor of the Cape wrote to ask me, by their desire, if it would not be better to come by way of the sea. I think that they may be useful on the Lake. If Mama had lived, you could have come and have been of great use in teaching, as Aunt Jane is at Kuruman. . . .

We had the sad news of the death of your Uncle Robert Moffat, leaving Aunt and cousins to mourn their loss. . . . Uncle John Moffat proposes to renew the mission to the Makololo.¹ In this I heartily wish him success, as it is a most interesting field and people. . . . Mr Rae is repairing some parts of the machinery of the Pioneer. The water is rising and we shall be up Shiré in a day or two. Mr Stewart has been looking at the country. I don't know

¹ John Smith Moffat and his wife Emily left the Matabele Mission at Inyati on 12 May, 1862: see *The Matabele Mission*, p. 181. Livingstone had wanted him to go to the Makololo: see *ibid.*, p. 183.

whether he will brave the difficulties before him. I am affectionately yours.¹

Journal B.2

19th March, 1863. Returned from the mission where we buried poor Dickinson, arriving at the ship at 3 P.M. and found them hauling her through at the ebony wooding place.

20th. Prevented from going on by anchors being put down foul by the lubberly sailors, who rather rejoice at such mishaps.

21st, got above a mile on and had to cast off Nyassa; then all day to get her up again a few hundred yards.

22nd March, 1863. Our native provisions are running short: bull killed . . .²

23d. Heavy rains. A glorious sunset last night: shewed two rainbows as extravagant as any artist ever fancied. They were in a golden reddish cloud and seemed to have no blue in them. Reached Mankokue's.

24th. Bought some maize for native crew and steamed on for wood, but was brought up about a mile beyond. Pioneer could go, but not with Nyassa alongside. Dr Kirk came down from mission. Clarke better; after croton oil and colocynth and calomel pill, quinine acted as a sedative and his senses returned. A bastard child of Rowe died at mission. Waller after the excitement very low and nervous.

Chibisa's son made great quantities of beer to thank the spirit of his father, lately killed by Mello, for sending these rains.

25th. Vianna's canoe in charge of Madumo came to-day, having started on 17th February; brought 100 bags of rice—price with canoe and men £21. Adams leaves this morning and so does Madumo. Vianna says 'he wishes to shew that he is a Portuguese', in sending off the provisions promptly. Reports death of Tingane and 2 chiefs by Marianno.

26th. Fog this morning shews that the rain is past. Lost yesterday by no wood being near. Men searched for miles and found no dry fuel: they are off this morning in search of it up river.

27th. Men came with wood too late to start. Still hot; 95°

¹ The signature is cut away.

² At this point eight lines are almost entirely illegible, as if obliterated. Words are occasionally visible but not to any clear purpose.

shews that the rains may not be over. The fog arises from the air being cooler than the water; a general fall of the temperature only shews cessation of the rains.

28th March, 1863. Steamed up to the high bank on the left as we go down. One of the Johanna men died of dysentery and was buried there. Having gorged himself with meat, diarrhoea began, and then he ate all sorts of food, hard maize, green bananas, ravenously. He sunk rapidly.

29th. Remained here over Sunday.

30th. Steamed up to the mission station. Rowley arrived from Tette. Terero, or Mello, who killed Chibisa, has been captured and sent to Mosambique by the Governor of Tette. He is anxious for an English mission near Tette; offers lands, as Tito did to me long before.

31st March, 1863. We did not get our wood down in time and had to remain at this station. The girls have the boyale ceremony here and call it Mowale.

1st April, 1863. We got under weigh about 8 A.M., a fog preventing an earlier start. We went to the rocky bend a mile above Chibisa's, and in trying to take Pioneer through, she was caught by a rock and nearly overturned, but swung over it. The keel probably was the part caught; on trying it again she touched, but lightly, farther to the right. As it is of the greatest importance to have L. Nyassa up as far as possible, we ran this risk: could not get other ship up, as current is so very strong.

2d. Getting the Nyassa up a work of great danger. . . ¹ Current too strong; drew home two anchors. Failed to get her up. Thornton arrived from Tette.

3d. Anchored Pioneer above the rapid in order to warp Nyassa through; a $3\frac{1}{2}$ inch rope of the navy. The best of all ropes as usual held her as she sheered across and had an immense weight of water on her. We went on in the evening and soon were brought up at $4\frac{1}{2}$ feet both sides of the river.

This is Good Friday.

4th April, 1863. Pioneer came through and we warped L. Nyassa after her passage. Went past another narrow passage singly and both went aground badly above it: could not move them.

5th April, 1863. Got off Pioneer but L. Nyassa kept us all day at work, a sad Easter Sunday. Makololo came with a present of beer. A letter from three men from Senna asking medical assistance

¹ Here follow measurements of the Madagascar ox supplied to the all-recording Livingstone by Dr Meller.

for Isidore. Dr Kirk has been ill of dysentery a fortnight; is a little better now.

6th April, 1863. Mr Waller asserted that his common sense assured him that the Makololo plundered the Manganja, and he would swear that he *believed* that they had so plundered, and had killed a chief up near the falls, though he confessed that he could not swear to any one deed of plunder by any one. The case has been one in which the people in huts have pumped in all manner of nonsense into the missionaries' ears, with or without some foundation. The country has been devastated by the Makololo—the people of Chibisa—the famine and the slave-dealers. Waller says that the famine caused 99 out of the hundred deaths that happened. He says that he saw Mobita fire his gun, but no one was hurt. The Ajawa under the Makololo went out and plundered; so did the people of the mission. He wished me to insure any one, who came to give evidence against the Makololo, impunity. This was declined, as any amount of falsehood could easily be foisted up against any one by such means. It is probable that the Makololo were told by the bishop that he would take them to their own country. It is certain that he contemplated going thither, and it is certain that he set them agoing at Monasomba's in capturing cattle after I had requested him not to have anything to do with them, in order that they might be induced thereby to return to Sekeletu with his medicine. And there was some talk of making Moloka a chief.

When Captain Wilson found them¹ feeding on preserved meats after receiving the statement that they were starving, he felt indignant and spoke his opinions freely, conjecturing that these meats were the only ones left. I wrote to them to put them on their guard against misleading others and, in so doing, I acted from the kindest motives by the mission; but Waller yesterday said, 'What Captain Wilson said rests only on Dr L.'s statement', and he in the course of the conversation said that I wished to make the Makololo out quite innocent. I expected this from the moment I was led to suspect the truth of the accusations when the Makololo said that Chibisa's people had been guilty, and the missionaries admitted such to be the case: but though expecting that statement to be made, I could not refrain from defending men who, by leaping out of the canoes and swimming alongside, saved our lives in the rapids of the upper Zambesi.

7th April, 1863. Got Nyassa off this morning and steamed $\frac{1}{4}$

¹ *I.e.* the European members of the Universities Mission who had offended by speaking against Livingstone's Makololo.

mile. Got aground again and remained near Makololo village. Mr Thornton came from mission. Dr K. recovering.

8th. Hauling the Pioneer all day. One party off wood cutting.

9th. Got her off and steamed up about a mile.

10th. Steamed up, trying the water constantly for rocks. By anchoring and sounding in a boat, found rock at a side passage 8 feet deep. Then at a point above that, and reached the cataracts after having been 3 months from Shupanga. Very thankful to reach them.

11th April, 1863. Got the oxen ashore after buying with 2 fathoms and more rice and maize than the spot would bear a garden patch.¹ They were quite frisky after being five months aboard, and capable of drawing at once. The mules at once took on their wildness, though as tame as could be on board. Cut down reeds off the bank and prepared to land the goods on board Nyassa.

12th, Sunday. Hot North wind yesterday, followed by South wind to-day, ended in rain. Most of our rains come from North.

13th. Rainy morning. After breakfast got forge ashore and Rae made iron for pole of waggon. People unloading Nyassa. Went up and found a gradual slope to the first plateau. Mr Y[oung] ill with chest pains.

14th. Mounting waggon. Our provisions are running low, and I must go and arrange for more. Mr Waller leaves. A crocodile killed by him came down three days after a shot in the belly. He had leeches in the mouth, which confirms the statement so far of the ancient Egyptians who spoke of the 'sicsac' picking them out. The animal does sleep with his mouth open.

Tried waggon with two oxen: they drew it easily. Began to build a hut for the goods.

15th April, 1863. At this work all day with Johanna men: others unloading vessel. Found Zachariah had kept oxen and mules tied all day without food or drink. Gave him one stripe with a rope to let him taste how it felt, and promised him ten of the same next time.

16th. Got garden and pump in order and sowed onions, radishes, cucumbers, parsley, carrots and beetroot.

A letter from Mr Procter states that Masiko killed a man of the Ajawa yesterday and his brother is coming to tell us. Moloka and Ramakukane came up with presents of beer and meal; had a 'difficulty with Mobita'.

Johanna men thatching and making a hedge. Carts and waggon getting ready.

¹ So in the original: an obscure sentence.

17th April, 1863. Sowed English peas, beans, lettuces and Kuruman parsnips, water melons, red and black seeded. Johanna men thatching hut; Mr Young unloading the Nyassa. Cover the seeds with reeds laid crosswise, and grass to preserve them from scorching sun. Drew net last night and got 6 unguesi fishes. Do, Do¹ and got eleven. One seems new, from a long process on his dorsal fin that lies along the after part of the body.²

18th April, 1863. Sowed Nasturtium seed, Lettuce, Spinach and cabbage. Put up a box for bees, as they often swarm into such.

Thornton ill of diarrhoea. Zachariah and Pearce Do. Yellow B. fever and so³—change to cold season. Began road with three Johanna men; cleared off grass and stumps for 300 yards, and sent stokers to try mules in the cart. Saw blind worm, the first I have seen in Africa.

19th. 'Nor doubt the gracious will of Heaven: Who gave His son, sure all has given'—Keble. He that spared not his own son etc.

20th April, 1863. Tried one of the mules in a cart and found him pretty well. Rest of day opening a path up to the plateau with Johanna men.

Mr Thornton removed on board Pioneer from L. Nyassa seriously ill of fever and dysentery.

21st. Mr Thornton got gradually worse through the night. Seems like typhoid, and cannot now swallow or articulate. His journey overland to Tette took an immense deal out of him. Previously he was very strong and had very little fever, but on returning from it he was quite haggard and done up. Bathing in the mornings brought on fever and diarrhoea, with continued vigilance,⁴ which no opiates could affect. He has had enough of quinine. I had nothing to do with the Tette journey. It was spontaneous on his part. The missionaries never expected that he would offer his services but, when he did, out of kindness, go to be spokesman for Rowley and, in fact, to transact the whole business of buying goats and sheep, they were thankfully accepted. I heard of his going only after he had left by a note which he sent down to Pioneer.

22 April, 1863. We buried Mr Thornton's body by a large Baobab tree 500 yards below the first cataract and 100 or so back from right bank, about 50 from left bank of a torrent coming from

¹ So in the original, obscurely: =ditto.

² See Livingstone *Narrative*, p. 305. Miss E. Trewavas, of the British Museum, Natural History, identifies unguesi or Nguesi as the Tiger-fish (*Hydrocynus*) and Konokono, the fish with the long process on his dorsal fin, as probably *Synodontis*, a Catfish with a long adipose fin and related to the Matacaiman (*Alligator-killer*) of South America.

³ So in the original.

⁴ *I.e.* insomnia, wakefulness.

West. Took an inventory of what things he had here. Moem-bedzi Rivulet.

23d. Tried the oxen and found the waggon too heavy for six. Got them up to top of hill.

24th April, 1863. Selected Mr Thornton's things for going home; gave clothing, utensils, to servants; one piece of cloth to carpenter, some shot to steward.

Tried oxen again and found them very unable to draw up an ascent. Resolved to send to Senna for more oxen.

Five slaves ran away from Quillimane and came to live and work here, but we cannot employ them. They report the death of Isidore.

25th. Told the Runaways that we had men enough and could not feed more, as all the food must come up the river. They may settle in the country if they choose but, having received the worst education in the school of slavery, they never turn out well.

Went to make the road. Oxen did well, but pole gave way. Went forward to see the country in front; quite flat. I calculate that I passed through two acres of cotton, and that very fine. Wandered in return and came home by another way. Grass seeds very annoying. Boat painted for voyage.

26 April, 1863. Mr Rowley officiated.¹ Shupanga men wash every evening. The Johanna never do unless ordered.

C. Livingstone said that he wished to go home; was rather afraid of the last attack he had of fever. I agreed to let him go in Thornton's boat.

27th April, 1863. The anniversary of my poor Mary's death. Prepare me for death and judgement and eternity.

Gave Dr K. permission to retire, he having had a bad touch of dysentery. Requested to go home some time ago.

28th. Dr Meller proposed to go away too: he has evidently got a fright by Thornton's death and explains his three years as out in the end of July, ignoring all the time he was an invalid at the Cape, namely, from April 1862 to Novr Do., or seven months.

A Johanna ox took a stubborn fit and obstinately pulled back. This I never saw in African oxen: it is common at Johanna. It is like the vice of 'bucking' in Cape horses, known nowhere else. The horse bends up his back and shakes himself so that no one can sit him during the fit.

Some of the Shupanga men wish to go home. A Johanna man, Juma Jin, caught stealing sugar and biscuit in fore-castle at night.

Wrote to Galdino to receive sailors and hire a house, feeding them with proper food, to employ Jão, of Shupanga, to bring or send up

¹ 26 April was a Sunday.

stores, to secure a passage for Ali and Mabruach, Mr Thornton's men, and wrote to Mr Rich of Zanzibar to pay their wages and receive same from English consul, putting to Mr Thornton's account with the Foreign Office. Request provisions for us and passage from Man of war for C.L. and Dr Kirk. Ask Galdino to use £150 from Cape in paying himself, Senhor Manoel £18 as part of Mr Thornton's bill of exchange for £60 for goats for mission and self; to pay Tito for rice and give Dr K. what is sufficient for his expenses, and receipt and demand for £100 in case no money has come from Cape.

29th April, 1863. Writing to Govt. Men making path over brow of ridge. Mission canoe came up. Sent certificate of life to Captain Washington. Weather very rainy; drizzling.

30th April. Made another road up to the ascent; grass seeds very annoying. Mr Procter came up to spend a few days with us.

1st May, 1863. A soldier came from Tette with notes for Rowley and Thornton marked '*Private and Confidential*', respecting my letter in the Cape papers ascribing all the calamities of the missionaries to Tette slave hunting. These are evidently intended to elicit replies which may exonerate him from blame. Rowley said '*that on the merits of the publication I can give no opinion*'. I suggested to Mr Procter that [the] word *can* or *merits* should be altered. The letter to the Governor.

2d May. I was laid up by a severe attack of dysentery which came on by no apparent cause. Six days and nights constant purging reduce the strength. Dr Kirk attended on me very kindly, though all ready to start. The course of treatment evidently is to clear out the alimentary canal by sharp purgatives, in this case first pills of calomel, colocynth and a little resin of Jalap, then pills of calomel and compound Rhubarb pill. After this astringents are needed and food.

9th. Much of the pain ceased to-day and in the night an opiate with acetate of lead gave rest.

10th May, 1863. Retching still if food crosses root of tongue. Native beer is the best drink I had. It is light and always pleasant.

11th May. Could have eaten sardines, but all are gone. Many thoughts course through my brain.

Two sheep were attacked and one killed by a leopard last night.

We shall probably hear of a hurricane on the coast; had 3 days' hot North wind. Then a sudden lowering of temperature on 10th, which left us only one fit to go to church. Then rain and on this day, 11th, a very high south wind.

12th. High wind after rain in morning. It was a hyaena last

night: he took strychnine, then vomited large portions of a young woman: was asleep or stunned and was shot by Dr K. and Dr M. Put up a piece of iron house to protect mules.

13th May, 1863. Cold wet weather and many sick. I am recovering but tone of bowels seems for present lost. Procter returned to mission station.

14th. Very much rain during night. Wilson ill again.

15. Weather seemed to change and better health came with it to all.

16. Mr Young asks to go down with the canoes that come up with provisions—a dodge to get more pay.

17th. A buffalo swam across to us and was shot in several places, yet got away after swimming back to the other side.

18th. All luggage into canoe; packed up mail and got all ready for starting to-morrow. Crocodile shot, having previously lost his forepaw and end of tail.

19th. Dr Kirk and Mr C. Livingstone started down river about 10 A.M., Dr Meller convoying them to Chibisa's. Four Shupanga men went with them. Most of our pork is bad, very old and rancid and only half weight.

Thornton seems to have had an introduction from Governor of Tette to the Ajawa chief!! I am sure that they have been at the bottom of all our troubles, the authorities keeping discreetly in the background.

20th May, 1863. [No entry].

21st. Recovering from the dysentery. Men who can repairing the paddle wheels. People go to cut down trees to make floats.

Charley complains that Chibisa's son cut down his maize on the island as a means of make¹ him leave that garden: advise him to bear the loss and I shall speak to Chibisa's son.

22^d. Several of the men sick, apparently from the change of weather. It is cold and damp now. It rained continuously from 10 A.M. till dark,

23^d. Send down 50 lbs of salt meat for fresh from the mission.

24th. Dr Meller has a touch of dysentery. It begins by a dull pain above and behind the bladder. Free purgation in the commencement seems essential. Dull cold damp weather seems to cause all our sickness.

25th May, 1863. Weather fine; sick all better.

26th. Dull again but not so cold: 72°. It has been as low as 58° in the mornings.

Garden seeds all bad: none vegetated except melons and cucum-

¹ So in the original.

bers from Kuruman. Sowed the remainder, to see if one or two will vegetate—and *wheat*. Messrs Procter and Waller go up to the hills to-morrow to look for a habitation about Mbame's. Mr Rae repairing paddle wheels. Men brought down two Tamarind trees to make floats.

27th. Dull and showery: wheat and seeds. Waller and Procter go up hill to-day at 11 A.M. Mbame's seems to attract them.

28. Dug a saw pit. Mr Rae making a whip saw out of a cross-cut.

29th. Showery and cold. Hear that 10 head of cattle are coming but 2 died. Waller returned; Procter knocked up with dysentery. Roads blocked up in grass.

30 May 1863. About one hundred and seven cotton bushes growing in the small corner near the ship. Wheat up in 3 days.

31st. Divine service, for which I have been unable during the whole month.

1st June, 1863. Moloka came with 10 head of cattle from Senna: four bulls untaught and rather wild. Paid him and his companion a heifer each and pleased them much. No news, except of Isidore's death. Sent 2 carpenters. Mankokwe sent a tusk to Mr Ferrão, desiring him to take possession of his country and prevent the Makololo taking it. He bought the tusk and said the country was too far away.

Some Ajawa were expelled from the Makololo and came to the mission, remaining some weeks, picking up any food they could get. They lately went down to near Mankokwe's and killed a headman, robbing his gardens afterwards. By and by one Makololo after another came to the missionaries, condoling with them because the *mission people* had behaved so badly!

2^d June, 1863. Wrote to Mr Ferrão desiring him to send his bill for 10 head of cattle to Col. Nunes, and to Col. Nunes and Dr Kirk to settle it by drawing more money if necessary.

Carpenters hew very well. They are dressing up the logs and will saw them for floats.

3^d June, 1863. A curious bend in trachea of tufted guinea fowl, resembling that in swan, to be looked for.

4th June. Air 47° at sunrise. Men cutting wood for steaming while we are unable to do other work. Carpenters sawing up floats. Weather fine and cold.

5th. Sow more wheat, manuring it, a thing never done in this country. Mice eat the young leaves.

People refuse to tell the missionaries who were the guilty parties, and all stragglers are sent off the place. The Ajawa will not tell,

and it is said that the Manganja are afraid to tell, lest they get their 'throats cut'.

6 June, 1863. Misty rain, such as are called 'rains of the wheat'. Killed an ox by trying to make it get up. It seemed to have the trick of lying down of old.

7th. Morning prayers; was able to walk up to village at Falls (Thanks to Him who healeth all my diseases and crowns me with loving kindness and tender mercies). One old hut had eight drums lying about it, and at least six had been brought down here by the Shupanga men. King very ill from long-continued haemorrhoids and fever: bloodless and becomes incoherent

8th. Seven floats cut. Other wood brought down. Procter ill of dysentery. Mission people procured much corn self-sown on the hills.

9th. King a little better in the afternoon. In the afternoon an empty canoe came down the river and shortly afterwards a woman was seen swimming on the other side. Sent men to help her. When brought she had an arrow-head entered below left ribs behind and slanting up through the diaphragm and lungs, towards the base of the heart. Air was coming out of wound. Said she went over to other side, probably to get grain out of the old gardens and was shot by an Ajawa. She must have been stooping when she received the wound. There was no possibility of extracting it, so we sent her up to her own village.

Sowed a little wheat.

Masiko came up with a present: says that all the Ajawa people at the mission were engaged in the late foray: if so, no wonder that they would not tell on their companions.

Endamoshule came up with his leprosy for cure: his hands and feet are swollen and so are his eyebrows and nose. All his body is covered with it. Has two wives.

10th June, 1863. A thorn wood called Monga has a very strong smell, partly of garlic. It is an acacia.

Messengers came from Tette from Srs Manoel, Clementino and Terrazao. Manoel claims £70 for cattle and goods, Clementino £86-6, as shewn by a bill on his brother George Thornton of Bradford.

6 pieces of white cloth of 30 yds each received by us and Dr Kirk from Thornton's goods. Mr Waller agrees to join in making up the £10 of the £70. Waller comes with 2 bottles Port wine.

11th June. Punished Alumsha for persevering in tying up the mules and oxen after having been plainly warned not to do so.

He made them quite lean. Made one of his countrymen do it, and flogged him if he did not do it hard.

12th June, 1863. Sent off letters to Tette by the messengers. Waller returned: the woman shot by the Ajawa with an arrow is recovering. It was cut out by the people themselves.

Men cutting wood for steam. Another man came back with two arrows in him. They go over to get self-sown corn or Mapira.

13th. Getting ready to go up and examine the boat whether it may be so patched up as to serve. While we went for despatches to see if we can divine therefrom our proper course, we might see whether a large river flows into the far end of the Lake, perhaps from the Lake Moela or Tanganyika.

Men finish the thorn tree to-day, making about 21 planks in a fortnight. Mr Rae proposes to build a small boat for the small engine at Tette, 45 ft by 8, and 10 inches draught, for Rovuma.

Sowed some turnip-seed from mission.

14th. Divine service as usual. King improving. All in good health. Rae ailing a little.

15th June, 1863. Ready to start for upper cataract. Some to remain at Mokurumadzi to kill game. Mules did very well, but we lost our way, going between the two paths, and passed through rough country. Came to sleep at small water where some quite new huts were built. A child's skeleton wrapped up in a bit of mat and a man and his wife's bones lay side by side.

16th. We passed about 3 acres of very fine cotton yesterday, but no one to gather it; it falls to the ground. The fibre about $1\frac{1}{4}$ in length and plenty in each pod. Villages everywhere with fine gardens and holcus sorghum. Voandzeia or Congo beans still growing, but not a soul to be seen. We went west, past the watershed of the stream we got water at, and this took us to a very large village quite deserted. Got over deep gully and up a high bank; got to an inhabited village; people subsisting on self-sown corn. Got a little meal from them for cloth, and one promised to shew us the way. Passed at least one acre of cotton.

17th June, 1863. The guide said that we were close by Mokurumadzi and would reach it in the same morning; but he meant to take us away down to its confluence with the Shiré. He wished to take us to Manganja villages and, when we turned off from his course of E. and by S., we got into a succession of gullies, which quite tired us out. We slept further back towards ship than the night before.

18th. I think we have succeeded in convincing the guide that we don't want to go to the confluence nor yet to his friends. Saw



$\frac{1}{2}$ acre of cotton. He disappeared and we went on Northwards without him. When we reached some people, all fled and the guide brought up other two men and wished to return. A little girl at one of the huts shewed us the path and about 4 P.M. we reached the long sought Mokurumadzi. It contains a good deal of water and is rocky; much spoor of game.

19th June, 1863. The grass seeds are sharp enough in falling to pierce thick leaves and stick in them. This is a further means of transport, for when the leaves dry they are tossed about by the wind and the barbs of the seeds keep them attached. $\frac{1}{4}$ acre of cotton on banks of Mokurumadzi, and Manganja population said to be on the hills to the N.W. of this.

Rain this morning till about 2 P.M. When Procter's hut was burned and guns went off in it, the Makololo thought that the missionaries were attacked by armed enemies, and rushed over with their arms to the rescue, shewing at least an intention to defend them. This is Blair's statement.

Went about four miles and saw no game. Course N. and by E. 20th. Sent cart back and went on Northwards with Mr Rae and Pennel [and] six Shupanga men to ascertain the state of the boat. Went six miles and found an inhabited hut. The owner gave it to sleep in.

21st June, 1863. A great quantity of grain is lying all around the hut. I cannot conceive why it is allowed to waste. A man brought us a good present of meal. It is alleged that the reason of the grain being unused is the want of women: all dead. Mpemba is name of country and Chibisa is chief of it. $8\frac{1}{2}$ miles.

Many elephants. A poor village reached; people not obliging. Build a hut for ourselves. Passed 5 gullies and a high ridge.

22d. Elephants through the night disturbed the villagers. Went 4 miles over level country and stopped to rest at a fine deserted village with a deep gully in front. Came to the Lesungwe Rt and went along its right bank and passed six acres good of cotton, all foreign sorts. By this we avoid crossing the Lesungwe at confluence. Then all the distance done to-day was $10\frac{1}{4}$ miles by Pedometer. Sleep in village of an old man with one eye. People very civil but poor.

23d June. Pass through 2 acres of cotton which the people were hoeing and weeding. Pandwe hill we leave on our right in going. Passed along one side of a cotton field at least 8 acres square. I paced part of it and found it to be 630 paces; the breadth seemed greater. . . . Stopped to breakfast at Tsanganu. Went $15\frac{1}{4}$ miles in all, a great roundabout, being deceived by the guides.

24th June, 1863. Reach village at Mofunda falls at Breakfast; 6½ miles. People collecting the beans of cow-itch for food; They burn off the prickles and then shell them. At Pamofundu falls. Total distance 14 miles.

25th June. Breakfast at Rt Nchumoke. Passed village recently burned by Ajawa. People on an island from fear of them. ¼ acre of cotton, chiefly Kadja. To boat 7 miles: found it burned last August. The Manganja are anxious to make us believe that it was burned by the Ajawa, but it is more likely to have been done by the burning of the grass around, for none of the iron was removed: everything lay below as when burned. A marauding party seems to have come in Marimwe. The trees adjacent were killed by fire too. Returned to island at the bend: had a touch of illness. The Manganja seem to have lost all confidence in themselves, in each other or in any one else.

26 June. At Malango came to vil. among trees: total distance 10¾: 6 gullies.

27th. Started from Malango early and travelled 9 miles to deserted village, Mpimbe; a fine level path with iron wood. Mpimbe has been beautiful from several gigantic *Sterculia* in nearly a circle. A cry of 'War' was raised as we arrived. Went a little way to a headman called Ntonda or Ntunda. Our guide Pikila returned thence, an active intelligent fellow. Cross Lesungwe at Malo. Remember¹ to cross above it, as it has a *high ridge on the East*, and 2 deep gullies in a forest near large old village, Malo. Sleep there. Total distance 13¾ miles.

28 June, 1863. Reach Tsanganu to breakfast, 2¾ miles. 1 gully. Remember¹ to seek a good descent in the high ridge on this side of Lesungwe and avoid the two deep gullies of Malo; or rather cross Lesungwe further down and go up to the plain close by the *base of Pandwe hill*: 3 deep gullies. Cotton much seen again. Reach village of² an old man with one eye. Total distance, 7 miles.

29th June. Weather very fine and cold, with a little fog in mornings. One deep valley with rocky descent to Lesungwe, then one gully which must be bridged. One Do to be levelled, and one at old village where we leave river for Zamba's to be searched for better passage than that at river side. A good descent on West of village where we breakfast: 5¾ miles. V. reedy bottom. Reach Zamba's: 10 miles.

30th June, 1863. In going up take left hand path at big old

¹ These memoranda are marked by lines in the margin and partly underlined.

² The name of the old man is not filled in.

thorn tree, then along flank of Nyamvuru hill. Go to E. to avoid the deep gully of Zamba's path up to Mpemba: several gullies. Stop to breakfast in a bad rocky one, Kavunguti, $4\frac{1}{2}$ miles from Zamba's. The Hippopotami had become quite wary since we were here two years ago and all rushed to the other side. Shot into several.

Turned off to our old path and find it better than the new one of two.¹ In returning, remember it is to the right of Chambamira hill, but not far. Sleep at hut where we spent first night after leaving the cart: it is Mapoperire by name. We have had a good supply of guinea fowls from Mr Rae's gun: got 4 at one shot here. Total distance, $8\frac{1}{2}$.

1st July, 1863. Loud thunder last night with the moon shining brightly, and Mr Rae saw not a cloud. I heard the thunder and congratulated myself on being in a good hut. Went quickly on to Mokurumadzi.² All the natives heard it and observed that there were no clouds: they remarked 'We said, it was God' (Morungo). It seemed in the N.W.

Pedometer shewed 8, or 2 more than in going. Bathed in Mokurumadzi and went on. Total distance, $13\frac{1}{2}$.

Underlying rock of all, and rock of disturbance here, granite; then gneiss, much tilted up. Dip, about S.W. 60° . Above this mica schist and Hornblende rock; then quartz and fine argillaceous schist of pinkish colour. Lime (tufa) seen by banks of Shiré.

2d July, 1863. Went 9 miles through a broken country and found three Johanna men with provisions from ship. Reached at $4\frac{1}{2}$ P.M., having heard from Moloka on the way that the new bishop, Tozer, had come. He brought despatches for our recall from Lord Russell and the Governor of the Cape.

3d July, 1863. Bishop a non-resistance man, vegetarian and inclined to leave the country: prays for their Majesties of Portugal.

Mobita—musket; Masego—D[itt]o; Sesego—cow; Zomba—musket; Masiko—cow.³ The other Makololo go with us a certain length and, when we embark, hunt elephants, for which I give the ammunition and, if they are successful, they can buy cows with the Tusks from Mr Ferrão. All express anxiety at my leaving, and they will have no English to look to now.

4th. Wrote a note of welcome to the Bishop Tozer.

5th. He and Mr Alington very kindly came up. Found bishop a cautious practical man; has made up his mind to try Morambala instead of highlands here, in order to avoid expense of carriage up

¹ So in the original.

² The thunder went on. *Marginal addition.*

³ The cows and muskets were wages to the Makololo on their discharge.

Shiré, but will take the women and children of mission with him to Morambala.

I forgot to mention that Morambala is a detached mountain and in that respect is inferior to the plateau, as a mass of mountain clouds rests on it long each morning and evening.

6th. Divine service.

7. Went down to Chibisa's to look at our old Marobat waggon; think it will answer.

8th. Oxen take cart up and arrive at ship on 9th: 'Smokes' on air began on 10th.

11th. Thatching quarterdeck of Pioneer as awning was blown away. Wound inflicted by Mankokwe's people on Longe is healing. It went in slanting and, though his lungs are a little affected, he is well. Moloka ill again with a fresh abscess. Mobita, in difficulty with his companions, fled to Mohoka. Messrs Waller and Alington came up to visit us.

12th. A hut set on fire this morning by a stoker lying in bed at 7½ with a fire in it. He has been ill and is still nursing himself. Several pipes belonging to Lady Nyassa burned; this is unfortunate, but all events are under the control of the Highest.

Thou art as much his care as if beside—nor man nor angel lived in Heaven or earth beside.

—Keble.

Livingstone's Undated Comments on the Chibisa Mission

The Chibisian mission has resolved to have as little as possible to do with the Makololo, alledging that they are undoing all that can be done by teaching. This, though it is confessed that they have invariably treated the English with due respect, lived separate from the mission, and never opposed their teaching or interfered with their people, promptly obeyed the call of the bishop to aid him, Waller [and] Burrup, to punish Monasombalant the mission about 200 yards of calico in their extremity, tended the bishop and Burrup in sickness, buried the former decently and carried the latter some sixty miles home; they subsequently, when the guns in Procter's burning hut went off, rushed to the rescue in the belief that the mission was attacked by an armed enemy.

All this, however, is nothing in the scales against certain reports given by a few disreputable Cape blacks between whom and the Makololo there seems to have been a feud about women. These were condensed to me in the words: 'They have murdered and pillaged all over the country, we know'. This is deemed sufficient

to justify the above suspicious looking resolution. No evidence of murder has been adduced and, of two murders reported to me by the head of the mission, the murdered men are alive and well. They bore marks of punishment for stealing and when the head of the mission's attention was called to one of them being alive, the reply was given, '*but the [man] is wounded*'.

Admitting however for a moment that these 16 Makololo are the worst men in the country, the idea of their conduct arresting the progress of Christianity implies a poor pitiful view of that power whose Author, by 'beginning at Jerusalem', deemed it capable of coping with the case of the perpetration of a crime, the greatest the world ever saw. If to us South Africans, instructed by the case of the Hottentots, whose instruction was violently opposed by some, or by that of the Bechuanas who to a man resisted the early missionaries and went as a nation to embrace their hands in blood, the case of the Matebele who are sent on yearly forays of pillage and murder, does not seem desperate or warrant the missionaries to fold their arms in indolent idleness, surely with a power which once turned the world upside down, the high church folks need not despair. Bloody persecution did not arrest the progress of christianity among the Malagasse. And indeed, were it not Divine, the inconsistencies and hypocrisies of men in the church itself, would have driven it from the world.

APPENDIX

The series of five small notebooks, here distinguished as C.1 to C.5, overlap in time the dates covered by the larger journals but occasionally they fill time-gaps and also supply substantial additions of descriptive or personal interest.

Journal C.1

... Ncharoto: sleep at it on 23d Aug. 1859.

24th. Got some pieces of ebony and one of olive wood as fuel: plenty of guinea fowl and francolins. People carrying salt from Marshes South of vil[lage] in baskets and bags. Chibisa reported gone on an Expedition against Dafundata, who captured some of his people. Some say he has me as his comrade, 'molekane'. Atmosphere very hazy from so many fires burning off grass. Hippopotamus, frightened by us, fled under a trap. The poisoned wood entered his back.

24th August, 1859. Reach Chibisa's vil[lage] at 4 P.M. A lame man walking along bank beat us in speed, and the women, walking leisurely, went before us to the next bend or point best adapted for seeing us, and waited till we came up. Each person carried a bag with most of his goods therein.

Went ashore and told object of our visit, and that we were going on to the Lakes. Some said that Chibisa had been gone 2 months, that they would send to tell him, and give us a man to act as a guide. Others spoke as if he were not so far away: he has gone to tell his people that here they had made him drink Muave.

August 29. Leave Dakanamoio. $1\frac{1}{2}$ hour reach our breakfast place on Tambumbu, a feeder of Mokubula. Stop at Mokolongue vil.; buy a goat or get it in a present (or Chitumba vil.). $1\frac{1}{2}$ hour = 3 hours.

30th. Thermometer 59° : Min. 55° . Ascend very steep hill with much cultivation around. [?Barometer] 27.79: Ther. 75° .

Mochasaua vil. 27.05. 78° . $1\frac{1}{2}$ from sleeping place, fine village on ridge of hill. $\frac{1}{2}$ to breakfast. Smith's village on ridge of Mpemba: pass in the hollow north of it the Namopiri, and another larger rivulet running. Soche bears 80° from Mpemba.

$1\frac{1}{2}$ came to vil.; pass on to vil. under mountain. In all $3\frac{1}{4}$ [hours].

At Mochikunde find people all on the spree: very very much afraid of us. Sleep here. Chisonga is chief thereof.

31st August, 1859. Ther. 64° , Min. 60 at 6 A.M. at vil. Mochikunde. Mpemba bears 285 from pass on South of Soche. A march of 1 hour brought us to Soche and $1\frac{3}{4}$ to Mombame's village: = $2\frac{3}{4}$.

Mombame is name of chief and not Chambira, as he called himself formerly. He is a hearty fellow, always fond of a joke and laughing. Remain rest of day with him: he says he will give two or three guides to Chisunze.

Find that the nitrate of silver bath has been left behind, and no photographs can be taken.

1st Sept., 1859.¹ 6 A.M. Min. 50.5° . Ther. 55.5° . Leave Mombame and in 2 hours pass to eastern opening of pass Zedi and Pindi. From Southern opening Soche bears 273° and from middle Chiradzura bears 45° .

1 hour to vil. deserted: $\frac{1}{4}$ to another: buy provisions. $\frac{1}{4}$ to Mongazi's vil.: = $3\frac{1}{2}$ hours in all. A person having died here, the chief met us and told us, if we did not like it, we could pass on. We remain over night. Chiradzura is to the west of vil. Mongazi's village 2 Miles South of Chiradzura.

2 Sept., 1859. Min. 50° ; 57.2° . Dew. March two (2) hours Easterly in road to Kangombe: then Chiradzura bears 318° and 295° . Lies North and South; has a cup of lower hills around it, as if in rising it had lifted them up.

Pass Mombezi near to Mongazi: then Nakunde or Malangalanga to breakfast, 1 hour: = 3 hours. Cross Moenje Rt, then $1\frac{1}{2}$ to Napamba Rt: stop to rest.

Moenje and Napamba are fine strong rivulets and the adjacent land very fertile and level, covered with tall grasses. $1\frac{1}{4}$ to vil. to sleep: = $5\frac{3}{4}$ in all to vil. Chibaba.

Bajana are on East of Lake Shirwa: Manganja live on this side. Pambe the name of God.

Kalonjere, Kakotene, Kapene, Mokakale, Manganja chiefs in front.

2 Sept., 1859. Chinama—Likaka—name of chief of south of Chusinze. A party of Bajana are buying hoes and slaves with salt....

'Shiré passes only: sometimes cuts its way through rocks, sometimes runs smooth, but there it passes and passes only'.²

*All are ashamed of slave selling.*³

3d Sept., 1859. 6 A.M. Min. 57° . 2 hours to breakfast on the Konde, a fine stream; 6 ft of water now at dry season; flows East. We passed a feeder, the Mutue and Metse-a-bango (mineral?)

¹ '1858' in original.

² Apparently a quotation, perhaps from an oral source.

³ This sentence is underlined by Livingstone.

before coming to it: cross Lekukutu, a small stream before entering village. $\frac{3}{4}$ arrive at Chisunze at 11 A.M. = $2\frac{3}{4}$ in all.¹

NTondo, name of chief on Zomba. Orumba, hill at Ngugo or Chisunze. Nyango is west of Shire. Rundo, chief of all beyond Zomba, but he lives behind us.

[25th Sept, 1859.] Mikuio, vil. of Kachisa, where we sleep and spend Sunday 25th Sept, on flank of Zomba.

26 Sept, 1859. Min. 64°. Air 66°. Much wind in night. Ascend by the usual trade pass to the Third Terrace: got a fine view of 2d Terrace and Shiré valley. Beyond from the pass we rise a 1,000 feet at once. Air colder. Reach Kangkanje's about 12 A.M.

27th. Min. 59°. Air feels fresh. Temp. of spring at Kangkanje 65°. Remain on account of C.L. having fever. Medicine does not operate well, although he has had larger doses than usual. People here had given Muave to their chief and, when we arrived, a large company had assembled to congratulate him on having vomited. I believe they sometimes offer to take it when suspected.

Copied out obser[vatio]ns for Mr Maclear.

28 Sept, 1859. C.L. still ill. Min. 60°: spring 65°. Great masses of thin clouds float over Zomba and much moisture is in the air.

29th. Air 55°; Min. 55°. Air outside fell to 52°. Ascend half way up Zomba and was obliged to stop from illness. It continued and all but beat me to ascend, as I was forced to stop every 20 or 30 steps.

30th. Reached the top of the ridge midway between the S.W. and S.E. peaks. Bar. 24.13. On peak 23.6 Aneroid. Boiling point of water 201.65°. At sleeping place 201.60 or .59. An[eroid] 71.5 = 6639 ft. S.W. Peak 7225 ft.

Mponda mountain North of Zomba: Morongoze river in middle that flows to Tamanda. . . .²

1st October. Top of Zomba, Min. 50° with dew. . . . Pombosi—name of pepper plant on Zomba.

Returned to village, where we left our 2d party, in about 2 hours. The underlying rock is gneiss lying on its edge and all striking to Zomba. Above the rock is syenite which, in decomposing, is like porphyry.

Oct 2d, 1859. 63°. 3 hours to Muatamango; $1\frac{1}{2}$ to other village to spend night, called Makoka. $4\frac{1}{2}$ hours in all.

¹ Beaneath a rough sketch of a native's head in profile Livingstone notes: Not a flattering likeness of Chisunze or Ngugo, 3d Sept, 1859.

² Here follow compass bearings of various landmarks.

A party of slave traders offered 2 virgins for sale: admired our cloths much; they measure by cubits. They say they get gold—20 gold pieces—for a virgin and 15 for a man.

3 Oct. 1859. 6 A.M. Min. 61° . Air 63.8° . March $2\frac{1}{2}$ hours. A wild coffee found yesterday. A person, 'fighting drunk', tried to stop path. Marched $1\frac{1}{2}$ to stream. Up here water all fine and cool. $1\frac{1}{4}$ to neck of Chiradzura. From southern neck of Chiradzura to Moenje 355° . Zomba S.W.S.

$\frac{3}{4}$ to a village: 7 hours in all. Came along Western side of Chiradzura. A kind of Bread fruit grown here.

Quinine produces buzzing ears after one dose, even when one is not using it.

Mokomo; Chief's name Pakamera. 5 fathoms for a slave. Cloth kept for this trade alone.

4th Oct., 1859. 6 A.M. Min. 63° ; Air 63° . Leave Mokomo for Mongazi, a little to the East to buy provisions. Reach him in 1-10. A damp morning, but no rain.

A dead man is burned¹ in his house and thorns are put round it to prevent any animal entering. It is then allowed to fall down in the course of time.

Mongaze is somewhat tipsy; presses us to remain with him all night.

Mburi—name of plumbago at Mbame: Shizira-Senna name of it. . . .

5 Oct., 1859. Leave Mongaze. Min. 53° . Air, 57.5° . March $2\frac{1}{4}$ hours to pass Zedi. . . . Lat[itude] of Soche $15^{\circ} 51'$.

6 Oct. Min. 58° ; Air 66° at 6 A.M. March $2\frac{1}{2}$ hours to vil. on southern flank of Mpemba. $1\frac{1}{4}$ to vil. on slope. Down to sleep, 1 hour: = $4\frac{3}{4}$. Mokolonque. . . .

Oct., 7, 1859. At 6 A.M. Min. 74° ; Air, 68° . Breakfast at Tambumbu and go on to sleep, having been 40 days away.

8th. Min. 71° ; Air, 73° ; Water, 80° . Found all right on ship, thanks to our Heavenly Father. . . .

Between the diary jottings of October 3rd and 4th Livingstone drafted proposals for the building of two steamers, as follows:

I. A steamer drawing five feet to ply between the Cape and the beginning of the cataracts of the Shiré (16°), entering by the

¹ So in the original: ? buried.

Kongone mouth of the Zambesi and not trading on Portuguese ground. This would secure all the produce of 100 miles of the Shiré and work out the supply of slaves for Quilimane, so far as Manganja is concerned.

II. A small steamer (dimensions as affixed) capable of being taken to pieces, each portion of less than one ton weight, to come out from England screwed together and, on reaching Shiré Cats, to be taken asunder and carried up in two Scotch carts drawn by four mules (to be purchased at the Cape), a distance of 30 miles, to where the Shiré is smooth up to Lake Nyinyesi, for the navigation of that Lake and trade in the immense country which it drains.

III. The crew of the steamer to be small and volunteers from the Cape naval station, with a few volunteer marines, or sappers and miners, to erect block-houses at each end of the cataracts and help in the passage of the steamer, and guard the block houses afterwards. In case of failure of health they could easily be sent to the Cape. The sheerest madness of exposure might cast blame on the whole plan and, as we have found, there are Europeans who readily engage in any romantic scheme, as this may seem to some with the ideas of boarding-school girls, and instantly collapse on coming to the hard matter-of-fact toil it involves.

IV. If H.M.G. should deem it proper to be at the bare expense of the steamers, Mr C. Livingstone is ready to take all the responsibility of the lawful traffic; but some time is necessary to make arrangements for the regular transmission of merchandise from England and obtaining the consent of the chiefs to the formation of Depots in this country; so the earliest convenient intimation of the pleasure of the Government in the matter is desirable.

Journal C.2

16th May, [1860]. After considerable difficulty we got the business arranged and started at 2 o'clock. Makomakoma remained, sick from lumbago from an old sinus in perineum; Nuenuangombe from an ulcer on shoulder. Takelan and [*name illegible*] wished to remain with their relatives but Masakasa went back and brought them on 16th. During night Muramfuramfu fled and this morning I offered to allow any one, who wished to remain, to go back to Tette. 2 availed themselves of this.

17th. Crossed Zambesi and slept on North bank.

Journal C. 3

18th. Marched $3\frac{1}{4}$ hours. A man called Sekandindi fled, taking with him 3 pieces of cloth, each 30 yards; fled to hills. Another, Molele, went off; was caught and left his gun. Slept at Shigogue.

19th. Donkey escaped, passing round camp at full gallop. 1-20 to Nyandue stream. People caught donkey and brought it up to us.

Charles sick; remain in consequence after about 2 hours' march. Natives in paring always cut to themselves; we cut from ourselves. 2 hours to Nyambue. Tongameka and Senyamakaronga fled yesterday afternoon, leaving everything. $1\frac{1}{4}$ to Panzo, Tito's farm. = $3\frac{1}{4}$ hours.

21st. Leaving Panzo, we marched $\frac{1}{2}$ an hour and, Dr K. having ague, we stopped at a village.

Pulsation of carotids, easily observed in fever, is Remittent, and pulse is often intermittent—3 quick pulsations of heart and then stoppage and a loud one following.

22d May, 1860. Marched 50 minutes. Dr K. another attack of Intermittent: had one during night. Makheto and Mosimane fled this morning.

23d. Chikka went off this morning. All who have children will probably leave us. We remain at Pangombe on account of sickness.

24th. March $1\frac{1}{2}$ to another vil. Slight shower of rain. Sent back Sikokotlo yesterday with 3 pieces of cloth and 30 brass rods and one musket. To-day Seamangara, who has bad sores, said he was unable to go on. The real reason for both returning is desire to be with their wives.

After $2\frac{1}{2}$ hours reached hamlet of Castelão, who was sent prisoner to Mosambique for administering 'Muave' and killing the person who had bewitched his child. = 4 hours.

25th May, 1860. Sealinletse fled during the night. 'Choka', one of Sr Tito's men, pretended illness, evidently for the purpose of returning too. Ordered up luggage to send back. Mozungo and two of his men came up, and said they too wished to go back; and so did Maũlo and Seangara. Gave them 4 bundles of cloth 7 muskets, 58 brass rods and 2 sextants and one artificial horizon, and my double barrelled gun and a letter to Sr Candido, desiring

him to count the goods returned and deliver them to Rowe. All seem disposed to go back.

1 hour to spur of mountain touching water.

Masekalenya, Moteke, Sekuasha, Bolebotsa, bundles of cloth returned.

Sime, Ramagarika, Kafirikano, Mo, bundles of brass rods returned.

$1\frac{1}{2}$ to Pachibebe, a village opposite Panda Mukua. = $2\frac{1}{2}$.

26th May, 1860. $2\frac{1}{2}$ over rough rocks to village of a man Defue who shot a European soldier and fled hither. It is just past the narrow part of the river made by Panda mukua. Food dear. At last village a man who pretends to change himself into a lion came and sat down to salute. He smelt gunpowder from one loading his gun, and went to one side, trembling very successfully, and explained that he was Pandora, = lion, and could not bear the smell. At this village there is a house for the Pandora. He is the presider over their superstitions and gives medicine to kill game, occasionally roars a whole night or leave[s] the vil. for a month.

Here fault was found with our taking some sticks for fire wood which had been used in charming and were placed at a point where two ways meet, as sacred. I said that I would take all the risk.

27th May, 1860. $\frac{3}{4}$ hour. Donkey tore off one bag of calico: stop to mend. Found that Kaporo who pretended sickness in morning had come on a little way their own away.¹

Marched on an hour more: = $1\frac{3}{4}$. Remained over night at another Pandora village. His wife sometimes feels his tail wagging about at night, and places medicine on his head. His own spirit returns, and he takes them to the field and shews a buffalo he has killed. This is a general belief.

28th. March 50 minutes to village of Sekwenda. Course N.E.; turn to West, then North; $2-40 = 3\frac{1}{2}$. Come to river at village where Hippopotamus was shot in former trip.

29th. March to Luia and cross it. Mt Steph[anie] bears 296° from near bend of Z. at Luia.

$\frac{1}{2}$ to Luia: cross N and march $1\frac{1}{4}$ to vil. Sindabone, high hill N.W. of village = Nkomba: hill N.E. of vil. Mongua. Rugged mountain N. with Luia at its base.

We went by a better path than that on the river bank. People have not half loads, but are laden with their own things. It is disagreeable enough to find a proportion of them unwilling to go on, but how much more so it would be to drive a party of slaves. $\frac{1}{4}$ of

¹ So in the original; something seems to have been omitted.

ours have turned, and the same proportion of Tito's and Clementino's slaves.

30th. Headman Karemba gave a present of meal, beer, and a hyrax *Capensis*. His name is Kambera.

March 1 hour and rest. Path among hills close under N. flank of Sindabue. W. by N. $\frac{1}{4}$ to vil. with Sindabue due east and $\frac{1}{2}$ mile off. People making corn safes of bark of trees to place among hills, for provisions in case of flight. 1 hour along valley in hills and rest. 1 hour more to valley N. of Stephanie. A village with water. Headman of last village presented ground nuts and a Hyrax. = $3\frac{1}{4}$ in all.

31st May, 1860. March from vil. at Rivulet Kabadzo to that of Zandia called Ziba, 1 hour: breakfast. On starting found load of Simasiko on road: he had fled with his gun and brass rings and beads of Seakimba. Was a thief, even [in] his own country, and was stabbed by Tette people from whom he had gone stealing. Headman worthless, and unstable; very much the worse of being at Tette. . . .

1st June. Remain at Zandia to rest the men; weather cloudy and cool; fine rains fall occasionally. Sugar cane grows here. Plenty of calcareous tufa in bed of a fine little stream. Rice is also grown and sweet potatoes planted. Wild date bushes abound. Great quantities of a species of cucumber with spines, Kasonga, are cultivated in order to make oil of the seeds, and the cow-itch pods are collected and the prickles burned off before taking out the beans. A new kind of [*word illegible*] is met with. Buaze seen near Zandia's. People declare that no other cataract exists except Murumbua. Mantlamgabue and his companions kill a female elephant to-day. We proceed to it tomorrow morning.

2d June. March $1\frac{1}{2}$ to elephant in a valley N. of Zandia's.

Journal C.4

11th June—*evening*. Manners of a cotton spinner, of the Boers; didn't know how to treat men. An old filthy pillow that I got the benefit of it; that I cursed him, that I set the devil into him, etc., and asked if it was not his work to take time for me, and repeated again and again that I had cursed him. What part of Botany is Sunday cursing. Seemed intent on a row. Would be but a short time in the Expedition: regretted that he was on

this journey. Would rejoice when he could leave it. So far my brother Charles.

12 June, 1860. . . . March $1\frac{1}{2}$ to bend which goes from South to North by end of Manyerere. . . . Came to an island in river, and rocks called Kakolole, $\frac{1}{4}$ more to breakfast at the narrow part. Walked a mile up to see a cataract. Water flows slow through it. Then $1\frac{1}{4}$ over hills S.W. and then W. with some small rocks in river. Monkey of enormous size and fatness retired from a garden. He is believed to be a chief.

20 m. to a Motondo tree some six miles from Pinkue and 4 from Manyerere = $3\frac{1}{4}$ on 12 June 1860. Bagoba on N. bank of Zambesi = Mohoba: Batahala on other side. Moeu other name of Pinkue. . . . The name of our sleeping place under a Motondo tree is *Moserero*.

13 June, 1860. T. 64° . Clouded over. March $1\frac{1}{2}$ along bank. Small widely scattered hamlets in garden of Bakhoba. Make salt from ground on which it decomposes. River flows very slowly. $\frac{1}{2}$ more to Hill Pinkue.

A molando, arising from one of Masakasa's people going to a woman, was fined by the culprit giving all his goods. 1.25-2.0 to Loangua, a small stream with fragments of coal in its bed. = $3\frac{3}{4}$.

The people on left bank are Bakora, but farther inland in the mountains, Basenga. . . . Encamp on Loangua and send a present to Sekuangela of a handsome cloth, 2 bunches of large beads, and one lb of fine powder. Found coal in this stream. The people did not know it would burn till we told them.

Antelopes ought to be divided into those of the hills, plains and marshy places:

- (i) Kudu, Pallah, Kololo, Potokuane, blue buck, Mohele.
- (ii) Gemsbuck or Kukama, Kama, Tsessebe, gnu, eiland, Puti, [word illegible] Giraffe, blesbok, Nuni, tsepe, Gabitenne, Angus buck, Thianyane.
- (iii) Waterbuck, Oryx, Leche, Nakong, Poku, Bushbuck.

14 June, 1860. 60° . Sekuangela gave us nothing, but said the way was ours and he would have come, had he not a cold. Seems to think that he had a right to what he got.

We went on an hour and were then opposite a round hill Kuakampiri. N. $\frac{1}{2}$ more to village where all were making salt. R. Matapata. 50 m[inutes] to another Rivulet with bank of shale in it. . . . Lose much blood. Breakfast. $1\frac{1}{4}$ more to camping place. Dysentery. We passed Boroma's village. It is a little below the peak on the opposite range, and Kuakampiri on this. $3\frac{1}{2}$ to-day.

15 June, 1860. T. 55°. March 1¼ to a rivulet with Tette rocks dipping southwards; then 35 [minutes] to village opposite end of long range, as measured 191° from Pinkue . . . 2¼ to a point opposite the salt river. Much spoor of game. . . .

16th June, 1860. T. 50°. 1½ to Nyadumba's village on an island covered with trees. Another island with trees above it. . . . River makes a bend of a mile to the North or towards Mtemua but, though spread out, is deeper than anywhere below Tette. 1¾ to island of Mozingkwa. No people, but plenty of elephants. Dr Kirk fired into the ear of one from a tree at 12 yards distance. He staggered, shivered and went off, but being thick bush, was not followed. = 4 h[our]s.

17 June, 1860. T. 58°. People of a village at which we breakfasted yesterday came after us with provisions of all sorts for sale. All is confusion now with haggling and buying. Meal, ground nuts, beer, maize, fowls and knives. Our services are held every night at sunset and early on Sunday mornings.

18th June, 1860. T. 52°. March 1 hour to a second rivulet coming down from Motenina, having fragments of coal in it. Then ½: 10 m[inutes] to breakfast while an animal was cut up. Fustic tree opposite Mozingkwa. River here is shoal from a number of sand banks, and an island on south side. A water buck killed. (*I have to do all the hunting and carry the game too* '—C.L.) (*They eat the meat fast enough but it is impossible to get them to go for it.* —Do.) . . . 1 hour more along southern bend of river. . . .

19th June, 1860. 65°, about 6 A.M. March 1¾ to rivulet over rocky ground, river bending southwards, and spread out with sandy island. Marks of all sorts of animals very abundant. Tette rock 60 ft thick, horizontal, with fossil wood in it. . . .

1½ to school of Hippopotami. 30 minutes to Zingesi. Changane, a cone, bears 28° thence. 10 m[inutes] more to rest. ½ to sleep beside a broad sand river without water. . . .

20th June, 1860. March ½ an hour. Send to see if aught is killed. Many lions during night: have killed all goats on island, and all fowls even, but people will not kill the Barimo. Zebras near us in morning. 2 hours to breakfast near Mpendes.

Hippopotamus calf spoor 5 inches transverse diameter: his dam 10 inches do. A man came to see us who stated that he was the Pandora of the place. Asked him to change himself into a lion then, that we might see and believe. Said that it was only the heart that changed, that he pointed out witches to be killed, that he told when rain would come. Did not come last year but would this, if Mpende paid a mdandu which had kept it back. Said he made offerings of

*Ceremonial Burial of Christ on Easter Saturday.
Procession leaving the Church at Tete, 1859*



beer by pouring it out on ground to Reze: could not understand that he considered it expiatory.

Another man is in Olea's place. He died last year. This said that praying to God would do for white but not for black men. . . . March 1 $\frac{1}{4}$. Mountains of Zumbo and Mburuma appear.

22 *June*, 1860. T. 56°. M. 53°. March 1 hour to Rivulet where we got a waterbuck, Dr K. 1 hour more pass rivulet with shale in it. 1 $\frac{1}{2}$ to rivulet with shale, then $\frac{1}{2}$ to a sulphureous spring. = 4 hours.

A great deal of fustic or Machuria of large size in these parts. Elephants' droppings—male 7 inches in diameter. 2 more = 6 to Chilonda's village.

23rd *June*, 1860. T. 67°; M. 62°. Clouded over. Gave a good present to a visitor of Chilonda's, Namazunza, a man who gave us a large present of meal last visit. 1 fathom to Chilonda. He apologised for not having canoes. . . . After marching 1 $\frac{1}{2}$ hour, many water bucks and Pallahs. . . . $\frac{3}{4}$ more past a sand stream and village. . . . 2 hours to Pangola's to spend Sunday, 24th. 4 $\frac{1}{2}$ hours.

Pangola came to us, a little intoxicated with beer, and spoke of his having offered me a house when in our former visit it rained; that I sat with my gun over my knees and said I was quite content. Came afterwards with a present of maize and refused 3 fathoms of calico: wanted a finer cloth.

24 *June*, 1860. T. 62.2°. Min. 61°. Pangola came to us when at our morning service: began to talk and, not seeing him, I said, Be quiet. Then invited him to sit down and hear. Went off immediately afterwards. His people never wash but smear their heads with red clay and fat.

25 *June*, 1860. T. 59°: M. 58°. Chibanku 68.

. . . March 2 $\frac{3}{4}$ hours to breakfast. Buffaloes and waterbuck in great numbers on a reedy plain east of Mansansue. (Lungs of water antelopes, ? does the pleura enter into substance of lungs and form a congeries of lungs?)

March about 3 hours to spur of Mansansue: get a water buck; Dr K. Chibonga got one too. 5 $\frac{3}{4}$ hours.

26th *June*, 1860. T. 52°, Min. 51°. Marched 3 $\frac{1}{4}$ hours round S. end of hill: $\frac{3}{4}$ more up to ford: = 4. at Zumbo.

Journal C.5

28 July, 1860. An. Bar. 26: 3 P.M. air 66.5° . Wet bulb 54° .

On marching $\frac{3}{4}$ hour . . . were then within one mile of Taba-chew or Chirebue Mt, which bore 25° E or 6° E true. It seems a rounded mass of granite with a light coloured Lichen on it which in some lights seems very white. It had water on its top and is said to be so difficult of ascent that several times people, having fled thither, have fallen down and been killed. It is the Morena or lord of hills. All around us are mountains covered with trees like those on Zomba—Masuka and other kinds of fruit. Seanzeba chief at the moment. Lystyo behaved kindly.

This rivulet flows to $192-18=174$ into Zambesi, where it is called [?Sakariense]: above it is named Mabele. One branch comes from Taba-chew.

Found a kind of grass, with serrated edges and reddish brown colour, which tastes like Liquorice. It is called Kezukezu.

28th July. Observed an occultation of Antares last night: it was bitterly cold. This morning the corn stalks were covered with hoar frost. Air at 7 h. 35° m, 35° . Water 54° .

Spend Sunday at Pakomakabozue. Leave two men at Seanzeba's, one having his feet swollen.

Mpata a na meya—name of a stream facing us.

Hear of the death of another headman who lived on Mparira. We go to plains of Marenje to-morrow. No tsetse here: called Ndoka. Bokulanga furnish iron to Batoka here. Chirebue is name of Taba-chew.

Cross Molombua, running 2 m[ile] one hour. . . . March $2\frac{1}{2}$ hours: Taba-chew then bore $97.30^{\circ}-19.30^{\circ}=78^{\circ}$ o', Course South of West. $\frac{1}{2}$ more Mataba: breakfast under a large fig tree on plain. Saw one eland, 2 oryxes. Killed one elephant at Matunta. $=3\frac{3}{4}$. Large female elephant.¹ . . .

Rt Motunta, where elephant was killed, flows into Bolea.

31st July, 1860. Leave Matunta. Taba-chew bears 101° . Sun at 7.40 bears 85° . March $1\frac{1}{2}$ to Kabembe Rt. See large herd of buffaloes and 4 zebras. Taba-chew bears 112° . Our course about 300° .

¹ Here follow detailed measurements of the animal and of the foetal elephant it carried.

$1\frac{1}{2}$ and rest a little on a plain, Chinkoba. $\frac{1}{2}$ more to water: rivulets running W now. Mochenga turned at mid-day back to cut up the elephant meat, $\frac{3}{4}$ of which were left untouched by our party. Gave him the 2 tusks, dried the lower jaw and preserved the foetal teeth for Prof. Owen. One side of upper jaw and lower jaw in charge of Dr K.

$3\frac{1}{4}$ Hours to-day. Chibumba or Ramoshotuane has been a scourge to the people on this side of the county.

1st August. $1\frac{3}{4}$ to Unguesi: water standing in pools. 2 to a zebra near water. = $3\frac{3}{4}$. Eclipse.

2d August, 1860. $1\frac{1}{2}$ to Kalomo: water in pools but not running. Meet a species of thorn like the camel thorn. $2\frac{3}{4}$ to sandy st[rea]m. Meet Batoka going to hunt. Men wished to force them to carry their loads and growled when forbidden. March $1\frac{1}{2}$ more to water. Met a Takhetse standing 150 paces off: was missed by Dr Kirk. Came to water in bed of a torrent. $5\frac{3}{4}$ Hours. . . . took Latitude $17^{\circ} 27' S$ and Alt[itude]s Mars.

3d August, 1860. March $1\frac{1}{4}$ to rivulet with water in pools, as most of them have. 1 more to rocky rivulet flowing S.W. Breakfast. Morning march = $2\frac{1}{4}$.

2 hours more: came into Tsetse. Riv[ule]t Sinde, fine stream with clear water flowing S.E. $4\frac{1}{2}$.

4 August, 1860. March 2-10 to small rill in trap with zoolite. March 2 hours and by following Zebra I passed into another village. Waited some time: saw people pounding a plant to cause fermentation in beer. Went with me to village, Moachemba. $4\frac{3}{4}$.

Makumbya—a root used to promote fermentation. Mosi-oa-tunya¹ bears 222°

Boma, an edible fruit with plenty of oil: very soft wood: by boiling it yields largely.

We hear that Sekeletu is really afflicted with leprosy in the hands and that he has been long in secret on this account. The missionaries had fled,² or returned, after only one month's stay and after eating 4 oxen. One of their people had died. This probably influenced them to retire. It looks untoward.

Moriantane and his relatives—Ramotogo, Marne—were killed for trying to take away the chieftainship from him by poison. Great hunger at Linyanti on account of a failure of the crops this last year. Some Elephant hunters are near to us, but whether half-caste or whites we cannot make out.

Moseza—Indigo: so called by Barotse. Very abundant here.

6 August, 1860. . . . March $3\frac{1}{2}$ to village of Moyara. He shewed

¹ The native name for the Victoria Falls.

² Helmore's party.

us the medicine for Tsetse. ($1\frac{3}{4}$ hours. C.L. sick.) He¹ said that the bark of the bush and of the root is pounded and dried, then ground into fine powder: then about a dozen tsetse are ground and mixed with it. This mixture is put in beer and given to the oxen or dogs bitten by the insect. The inner wood of the pieces used are made to smoke the animals. He says that many will escape by this remedy, though it be not quite a specific. This is the female medicine used: it is Gonangombe or 'sleep oxen'. The female is Nengonengo. When the kite reappears the cattle are safe. He wished us to hide the medicine and not to tell others of it. His father used it. [?Seemed] to believe it himself, which is a great thing.

3 hours to Moshobotuane's village: $8\frac{1}{4}$ hours.

Sekeletu is said to be at Mparira island: come to buy horses from a white hunter now at Mosioatunya. Passed over much volcanic tufa to-day. The valley I thought to be the ancient bed of Zambesi as I travelled by night² does not look so to-day: but it might have been. Saw much of the other kind of buaze to-day: seeds ripe.

Lekone a fine streamlet, but there is tsetse all about Moyara's. He was pleased to see us again. Presented tobacco and hemp, then groundnuts and beer of Motsentsila.

7th August, 1860. . . . Remain: C. L. sick.

8 August. March 2.40 towards Mosioatunya nearly South, a little East. Come to Mashotuane's village. He had been carrying it with a high hand to an Englishman.

. . . Strychnos, varieties of—all edible. There are several kinds of fish above the falls which do not exist below them.

The sad news was communicated to-day that Mr and Mrs Helmore, their son, daughter and an infant of Mr Price had all died in the space of two months from their arrival at Linyanti, and the two young missionaries had retired. Ben Habib had never returned.³

Went to see Falls. Mashotuane ordered the men elsewhere and was very much disgusted when we got them in spite of them and paid them. He threatened to kill them. He has killed several people and, among rest, Takelan's wife.

Falls did not disappoint any one.⁴

10 August, 1860. March $2\frac{3}{4}$ to Lekone confluence.

¹ Moyara.

² That is, on his trans African journey.

³ See below, pp. 392 and 394 for the story of this Arab's evil doings.

⁴ On the preceding page, apparently while at the Falls, Livingstone made the following notes: the first relates to attempts to establish the depth of the chasm by dropping stones: '5 [seconds] with a big stone 6 s. with a small to get to bottom. Kazeruka is[lan]d in middle of falls: Boarouka is[lan]d on west side from ford.

Mashotwane had demanded a fine for Mr Baldwin's swimming ashore from the canoe.¹ March 2 to middle of large is[lan]d. Chundu vil[lage] Nambowe. $4\frac{3}{4}$. $1\frac{3}{4}$ to Mparira Island, confluence of Chobe. 5 Hours.

Moandi—small stingless bee: called also Koko.

Matsane—smell strongly of acetic acid.

14 August, 1860. Sail $4\frac{1}{4}$ to cattle post of Mokompa: 1 more to sleeping place.

15 August, 1860. $3\frac{1}{2}$ hours to river Mpure: cross and go on $\frac{1}{4}$ to a reedy spot with shelter, there being no wood: = $3\frac{1}{4}$.

Mochokotsi came down last night express from Sekeletu, requesting me to buy a horse for him with ivory sent down. I decline to interfere, as certain half-castes had fixed a price at 9 tusks per horse. He then said that the men who had been affected with small pox must go back to Moshotwane, and be sprinkled with medicine lest the disease should affect the tribe. I refused to go back or let them go. It is a doctor's trick. Sent back a message that we knew small pox and, were there danger, would have been the first to warn them of it. We did not flee from Sekeletu's disease, nor that which killed the missionaries and so many Makololo at Linyanti, so he ought not to avoid us.

We came up from Rivulet Mpuie and remain till we hear further. We will not enter the town without leave but, having Tito's people with us, will turn if they are obliged to do so.

After Mochokotsi left, some of Mokompa's people came down with tusks that had been sent up to Sesheke to buy from the Mambari who have come with Seroka from the West coast. They bore a message from Sekeletu to Mokompa to go and tell Mashotwane that he had offended greatly. 'He had not cursed Monare,² but Sebituane, as I was his father now', and he must deliver the fines taken from Baldwin. Sekeletu was 'very angry and Mokompa was not to hide the message'. We expect to be here to-morrow. He grumbles that we do not intend to stop longer than ten days. Messengers returned about 10 A.M. and desired us to go on, as Sekeletu tlologelecoe.³

16. $2\frac{1}{4}$ in canoe to Sesheke. Eastern part of town in ruins. Chief told us to live at tree of ford, but I asked a house, and he sent to one—a good but small one.

A party had come from Benguella. I scarcely knew them. They say it is travellers alone that know every thing. They now see clearly that we are on an island and that what I told them was true.

¹ See Livingstone's *Narrative*, pp. 260-61.

² *I.e.*, Livingstone.

³ So in the original.

A woman from the Mamyeti is curing Sekeletu of his disease: it is said to be bad.

An ox sent for, and Mokela said, 'Should the master of the town not sleep in a house'. Sorry to hear from two black traders from Benguella that Colonel Pires is dead and his son is in his stead. Many have died since I was there. People were three months and a half on the way from Benguella to this.

17th August, 1860. Went over to Sekeletu and spoke a long time: found that his disease was more Pemphigus than leprosy. Gave me tea, European fashion. Was very disappointed when I told him I did not know leprosy. Spoke to his headmen. Mamire thinks that acetate of Cantharides or blistering fluid, which cured his knees, would cure Sekeletu.

No meal to be had for love or money.

The missionary party to Linyanti consisted of 22 persons in all—9 Europeans and 13 coloured people. Of these 5 Europeans died of fever in the course of 3 months, and one went away very sick of fever. Four natives died too, the mortality being of all 9 in 22.

18 August. Went over to Sekeletu with C.L. and Dr K. Found that the disease began about the time of the disturbance about Lebeole and Moriantane, probably therefore the result of mental anxiety. Attacked left leg first: is now confined to legs, arms and face. Thin watery matter forms under cuticle: burrows. Had bloody discharge from bowels at time of commencement. Is now well—good appetite, sleeps well, tongue a little foul on sides.

Put on poultice of cow dung on legs to remove scabs and matted matter of a woman doctor, who scrapes the bullae till parts are raw, then applies medicine. She was consulted by us as to her giving up the case: did not relish that, but we must soon go off.

19th August, 1860. Gave Mamire the pistol brought for Lebeole. M's wife, Tselane, came and made as usual a long visit. On seeing Dr K. taking observations with a barometer and thermometer, she remarked, 'He seems to be playing like a little child. What is he doing?'

We took off the scabs from Sek's legs and bathed with Sulphate of Zinc, 1 grain to the $\frac{3}{4}$ of water, placing a greased cloth over the sores to prevent sticking. Gave a powder of Rhubarb, Soda and Quinine. This every morning and a pill of 1 grain Calomel, $\frac{1}{2}$ morphia and $\frac{1}{4}$ tartar emetic. Touched outside of sores with nitrate of silver to prevent spreading. Sores don't seem so bad when cleared of scabs. Stopped the use of hemp and tobacco.

20th. Legs seem healthy. Some few spots of new bullae, but nitrate of silver seemed to stop the burrowing. Applied poultices

to hand and leg above knee to take off scabs. Continue Sulph. Zinc lotion: does not feel sore when touched with nitrate of silver—a bad sign. Takes 2 pills containing quinine, Rhubarb, soda and ginger, every morning. Wash 4 times day, to wash his whole body and clothes. Looks better in the countenance.

He was ordering horses, etc., from Benguella: 'wished a bull and cow mule'. Thinks that the merchant Kandimba should not allow his horses to be bewitched before leaving, as they die as soon as they come here.

People all living in grass huts near him and drinking beer. Gave an order to a black merchant, José Antonio Alves, to bring 2 Arrobas of coffee of Angola and 2 do. of sugar for 24 + 36 [?dollars] of ivory. Sekeletu will pay for them in case I am not here.

Took over double barrelled gun and Minne Rifle.

21st Aug. 1860. Take out presents for Sekeletu. All of us shew burrowing under skin. Took to Sekeletu 4 fine rugs, 1 piece o. Mohair, 2 country cloths, 2 moleskin's jackets, 2 pr moleskin trousers, 2 Scotch tweed do., 2 Alpaca jackets—exchanged one for blue cloth do.—1 Uniform scarlet coatee and band, shirts.¹ 1 Accordion, 1 snuff-box, 3 felt hats and one hat with gold band, 1 pair scizzors, 6 clasp knives, 2 superior knives, 1 penknife. Present to his child from Mrs Allan's child.

Gave Mafalo a cloth and 1 lb of beads; 1 cloth and 1 lb of beads to Mokela; do. for Manchunyan, beads to son of Moriantsane, 1 cloth to Morike.

Spoke to Sekeletu about sending a friendly message to Moselekatse. Said it was cowardice alone that kept him in lowlands. Will send Sesheke² to Batoka country as experiment to see if Matabele will let them alone. Recommended him to try the air of highlands for himself.

Ben Habib ben Salem Lafifi never returned, though he left Loanda with the Makololo before I reached England in 1856.

Gave a cloth to Masekeletu and one to Seruane and the other head woman of Libouta, who is here at [word illegible]. Masekeletu spoke feelingly of the indignity offered to Mpololo as a destruction of the state, as underlings would proceed farther than this.

People sent to Linyanti brought only one packet of letters, and that despatches of 1858 from Lord Malmesbury.

23 Aug. 1860. Went over to Sekeletu, taking blue beads and 20 brass rods and 20 lbs of fine Powder and 5 shirts and one Jacket.

¹ Here follow thirty-nine pages of recordings of temperatures from 28 July to 24 August. The list of presents is continued thereafter.

² I.e., the inhabitants of Sesheke.

Read Queen's letter to him and Mamire, explaining as we proceeded. They understood it well I then told them that they ought to remove out of the valley to the Highlands, but it must be their own act, for if not, any evil that might befall them in consequence would be imputed to me.

Old doctress tried to get in her hand by sprinkling medicine on one of the sores. New spots appear daily, a creeping thing that covers large patches of the surface.

Kuenane came over to-day: is fully convinced that they ought to move—as all the true Makololo are pushing out of the tribe.

DISPATCHES AND LETTERS

No. 4.

STEAMER *Pearl*
22 March, 1858

The Right Honle Earl of Malmesbury

MY LORD,

For a considerable time previous to my departure from England my attention was so much taken up by the necessary preparations for the Expedition to E. and Central Africa which I have now the honour to command, that I could not bestow that due consideration on the dispatches Nos 3, and 4, which their nature merited, but having had some leisure on board ship and hoping to touch at Sierra Leone in a few days, I beg permission to place on record my matured convictions thereon for the sake, if need be, of future reference.

No. 3 contains a copy of a Portuguese Royal Decree directing that henceforth the name of Zambesia shall be applied to all the territories to which the crown of Portugal has a right in the valley of the Zambesi from the mouth of that river to beyond the fortress of Zumbo.

And No. 4 contains a duplicate of a Portaria which directs by order of the king of Portugal that all merchandise which I may take with me in my present journey be conveyed up the river free of duty.

While thankful for the kind consideration shewn by H.M.F. Majesty in giving this direction, I cannot help feeling that it assumes a right which the Portuguese do not possess. The mouth of the Zambesi which we propose to enter (called Luabo) has no custom house upon it, nor even a Portuguese village. And they themselves are in the habit of paying tribute in passing up to the independent tribes on its southern banks.¹

The Portuguese in Eastern Africa are very much in the same position as the English are in China, for they possess a few small forts at different points without the smallest degree of power over the independent territory adjacent. They are established firmly at Tette, but with that exception they are not allowed to live anywhere between the mouths of the Zambesi and Zumbo, but only on sufferance. Such being the case the assumption of territorial sovereignty which this decree and the Portaria imply, together with their previous objection to my being named consul to Senna and Tette on the river will only end in complicating the question of free

¹ The Landeens.

navigation of the Zambesi in the event of our success in opening the interior of the country to commerce.

It may seem ungracious in me to accept the favour offered by the Portuguese under a sort of protest, but feeling that in these communications with Her Majesty's Govt an authority is assumed which does not exist in Africa, I should be wanting in my duty if I did not inform your Lordship that the sovereignty of the Portuguese over the Zambesi is merely ideal and, as success on our part in developing the resources of the country beyond their forts will certainly benefit them, while no part to which they can lay claim will be interfered with, it will be impolitic for any new right to be either assumed or allowed.

As I am expected to furnish information respecting the state of the slave trade in Eastern Africa, it is desirable that I should have a knowledge of its working for the last few years. Will you favour me with copies of the correspondence of Admiral Trotter while in command of the Cape station on that subject.

I am etc

DAVID LIVINGSTONE

A true copy.

No. 5.

Copy. D.L.

STEAMER *Pearl*
23 March, 1858

The Right Honourable The Earl of Malmesbury.

MY LORD,

I beg leave to revert to the despatch, No. I. dated February 8th 1858, in which I am informed of my appointment to be Her Majesty's consul at Quilimane at a salary of £500 a year with £170 towards the expense of outfit.

In reference to the amount of salary I had no communication whatever with your Lordship's predecessor in office,¹ as my mind was so fully occupied with matters pertaining to the fitting out of my present enterprise that I paid no attention to my own private interests.

As the despatch referred to states that I am to understand the amount of salary now assigned as liable to revision if it should be considered advisable, in the event of such revision taking place I hope your Lordship will give the following points due weight.

As Her Majesty's consul I am restricted from engaging in

¹ George William Frederick Villiers, 4th Earl of Clarendon (1800-70) was at the Foreign Office from 1853 to 1858, and a warm supporter of Livingstone's undertaking.

commercial pursuits but am at liberty to appropriate to my own use under the Act Geo. IV etc., etc. Now I am to be employed for two years at least in exploration and in attempting to develop the resources of Central Africa, where the payment of fees will be all on my side and I shall never receive a farthing from that source.

Your Lordship will recollect that the sum of £5000 was awarded by Parliament for fitting out my Expedition. On the strength of this grant everything calculated to ensure success has been liberally supplied and thence the salaries of my officers are to be drawn. These have been arranged on a liberal scale on account of the arduous and dangerous service contemplated. Thus the half pay of my naval officer has been augmented by £450 to double commander's full pay, or £600 a year, and he fully deserves it, as he volunteered without knowing the salary and aware that his time would probably not be counted as service.

But in consequence of my salary coming from another source, or the consular department, I am put on a par with consuls who have performed no public service to their country and who, instead of leading an expedition which, it is hoped, will prove beneficial to English commerce,¹ are only to follow the usual routine of consular duties. I am also placed in the somewhat anomalous position of receiving a lower rate of pay than the naval officer whom I command.

Should your Lordship deem it undesirable to disturb the present arrangement, May I beg that in any future revision the points referred to be borne in mind, and due prominence given to the fact that, while Dr Barth² and other travellers have received liberal aid in the prosecutions of their travels from H.M. Government, I never received a farthing of pecuniary aid while making those discoveries which my countrymen are proud,³ nor is any part of the £5,000 so unanimously granted by Government to my private benefit.

I am etc.

DAVID LIVINGSTONE

¹ After 'commerce', 'difficulties and dangers' is deleted.

² Heinrich Barth (1821-65) the Hamburg-born explorer who under the auspices of the British Government, left Tripoli in 1851 with two companions, Richardson and Overweg, to open up commercial relations with the states of Central and Western Sudan. After the death of his colleagues early in the journey he carried on alone and reached Timbuctu and the Cameroons. He returned in 1855 and in 1857-1858 put out the two-volume account of his undertaking entitled *Travels and Discoveries in North and Central Africa*.

³ have applauded, 1st reading deleted. The revised sentence should read of which.

No. 6. Consular Department.

Life certificate up to the 31st March, 1858, dated Simon's Bay.

No. 7. Date 1st May 1858.

Advices, sail from Simon's Bay 1st May.

Earl of Malmesbury.

Bill of £50 from funds of expedition.

Bill of Captain Duncan on Ceylon Gov. for £130.

Information that Mr Moffat¹ reports my men, the Makololo, to be still at Tette and that they will be useful in spreading a knowledge of the views of H.M.'s Government.

Despatch No. 8, with enclosures Nos. 1, 2 and 3

STEAMER *Pearl*

22 June, 1858

Lord Malmesbury.

MY LORD,

I embrace the opportunity afforded by the departure of the Colonial vessel *Pearl* from this river on her way to Ceylon, to lay before your Lordship a sketch of the proceedings of the expedition under my command up to this date, and I shall also send a duplicate of this despatch by H.M. Steamer *Hermes*, which will contain the additional enclosures, being the remarks of Mr Skead, R.N. on this river, it being at present impossible for him to draw them up while still making observations.

The Senior naval officer of the Cape, Captain Lyster, having, with the consent of His Excellency the Governor, ordered Captain Gordon of H.M. steamer *Hermes* to convey the exequatur of the King of Portugal and other despatches to Kilimane, and also to render every assistance in his power to the expedition, we departed from Simon's Bay on the first of May last and on the fourteenth arrived off the mouth of the Zambesi. Being persuaded, from all the information that we could previously collect, that the branch called by mistake on the maps the West Luabo was the safest for effecting an entrance into the main stream, we crossed the Bar and anchored in a large well-sheltered harbour. In three days the Steam Launch *MaRobert* was got out of the larger vessel and put into working order, to act as a pilot boat to the *Pearl*. The great

¹ Robert Moffat, Livingstone's father-in-law, who had come down to Cape Town with his wife, to meet him.

body of fresh water that flowed down the river led us to conclude that it was the same which Lieut. Hoskins described as the 'most southern and most navigable' branch of the Zambesi, and we at once took the Pearl up nearly¹ thirty miles in that persuasion; but, finding that its most northerly branch gradually became smaller, the MaRobert went at least thirty miles further and found that the passage was there choked up by great masses of succulent grasses and aquatic plants which float on the surface. She next explored a more southerly branch of the same Luawe, but, after examining every creek to a distance of about seventy miles from the sea, the water was seen coming from beneath the aquatic vegetation through which even a whale-boat could not be forced. As we subsequently learned that the Luawe is actually an affluent of the Zambesi, though we had no time to examine its point of departure, it is probable that a sufficient amount of water for passing down the aquatic plants, so as to admit of navigation, flows into it only when the Zambesi is in flood. The large volume of fresh water we encountered does not seem accounted for by that which was seen percolating through the bulrushes, but no other passage was discovered, though Commander Bedingfeld, who has been actively employed in command of the MaRobert ever since she was afloat, Mr Skead, who by the wise forethought of Captain Bedingfeld, accompanied us to survey the river, and other members of the Expedition manifested unwearied zeal and energy in the search for an opening. The harbour of the Luawe might be used as a port of refuge for ships in distress to water or heave down in for repairs. We have ventured to name it Skead's harbour, as a token of our united admiration of the energy he has shewn in surveying wherever he has had an opportunity.

Leaving MaRobert in Skead's harbour, we next proceeded to examine the East or Parker's Luabo. We met the *Hermes* outside on her return from Kilimane without any official reply to my letter from the Governor, and Captain Gordon joined most cordially in forwarding we had in view.² He lent his cutter and his men to Mr Skead to sound the bar of the Luabo; but two formidable lines of breakers appearing constantly, even in still weather, we failed, during the three days we spent there, to discover a passage,³ and our estimate of the Luabo is far below that of Captain Parker. Fortunately it is not necessary to run any risk in reaching the main stream of the Zambesi. A glance at the map shews that the river has, in the course of ages, deposited matter sufficient to form a

¹ 'up nearly up nearly', in original.

² So in the original.

³ During the three days we spent, *deleted*.

promontory against which the long swell of the Indian [Ocean] beats during both the prevailing winds of this region. Two large mains¹ on to the sea at the extremity of the promontory, the Tim-line (improperly called the Miselo) and Parker's Luabo. The former we examined from the inside and found it deep and within a fraction of a mile wide. The latter is larger as seen from the outside, but the perpetual action of the N.E. and S.E. winds has formed bars which, acting on the waters of the delta, has led to their exit sideways. The lateral branches thus formed afford three or four good harbours of easy access, but none of them *appear* to be affluents of a large river. This, with the constant break at the main outlet, may be the reason why the size of the Zambesi above the delta has so long remained unknown to navigators.

By the advice of Captain Gordon we went to a branch about seven miles west of Parker's Luabo and found a still better bar than that at Skead's harbour, for the passage is nearly straight and at a very small expense might be so marked by two beacons as to guide any ship in with precision. Mr Skead and I went up this, the Kongone river, in the *Hermes*' cutter, while Captain Gordon brought round the *MaRobert* from Skead's harbour. When we had gone about eighteen miles up we met a native who readily volunteered to shew us the way into the Zambesi. He guided us into a narrow natural canal five miles long, and through it the *Pearl* afterwards entered this river. Another branch of the Kongone named the Doto leaves the main stream much higher up than this and, there being six or seven branches given off in the delta, the lower part is necessarily the worst portion of the river. Several of the branches alluded [to] are so connected by natural canals that the slave trade may be carried on by selecting different points of departure along nearly one hundred miles of coast, completely screened from seaward observation.

I now beg to call your Lordship's attention to the political affairs of the country and, as they are somewhat changed from what they were when I came down the river in 1856, a corresponding alteration in our plans is necessary, which I trust will meet your approbation. The first news we got from Captain Gordon on his return from Kilimane was that the Portuguese had been driven from their stations and were now congregated at that village. A letter I received from the commandant of Tette stated that he had been a prisoner there for the last six months from a dread of the natives between Mazaro and Senna, and he added that it would be impossible for me to go up ten miles up the river, as we should certainly be

¹ So in the original : ? main streams flow.

fired upon by the rebels. Although fully aware that the Portuguese possess only a nominal sovereignty, I resolved in my future progress carefully to avoid being in any way mixed up with either native or Portuguese affairs. It is rather fortunate that matters have reached this state before we came to the coast, for it cannot now be alleged that our presence contributed in any way to the result.

It appeared desirable, before placing the Pearl in a hostile territory, to make a trial trip to the part indicated by the Portuguese as unfavourable; and as the river below Mazaro was known to us only through Captain Parker's report, regard for the very stringent orders we received not on any account to risk the detention of the Pearl in the river, led us to examine carefully the prospects presented by the daily fall of the river. We examined the bed of the Mutu at Mazaro, which Parker found sixteen feet above the level of the water in the Zambesi, and found it was only three feet above the same level; but it was falling at the [rate] of two inches a day and, though it must still decrease thirteen feet, as the Pearl draws 9 ft 7 inches, is very long (160 ft) and, being a screw, does not back readily nor obey her helm except when at full [speed], and her provisions were expended, even in view of the opinion of the naval officers that, by carefully surveying each bend of the river, we might take her as far as was originally intended, we all agree that the more prudent course was to erect the iron house on an island, place our goods therein, and, allowing the Pearl to proceed on her voyage to Ceylon, trust to the Launch and Hermes' Pinnace to carry our luggage up the river.

Our reception by the natives was not so bad as was predicted. When we came in sight of Mazaro we saw about 200, well armed with muskets, waiting to receive us as their foes. As the MaRobert slowly approached the shore, Captains Gordon and Bedingfeld, with Mr Thornton and I, stood on the deck house and, when within hail, I called out that we were English and pointed to the English ensign. No sooner did they know that we had come peaceably than they gave a shout of welcome and they were soon seen running down to the water's edge with bananas and fowls for sale. Landing among them we explained our objects in coming. Some remembered my having passed the same spot two years before and spoke of the English as opposed to the slave trade, while others shewed much suspicion and would neither lay aside their arms nor sit down to talk. We observed that many of them had slave brands on their chests, and it was evident from the want of deference to those whom they pointed out as headmen that they were in a disorganized state and could not be entrusted with our goods. I am ignorant of the

causes of the present hostile position of affairs, but it is probably the result of the cordiality with which the Portuguese out here entered into the notorious French emigration scheme; for the natives informed us that great numbers were sold out of the country during the last two years.

The experience of the Expedition agrees exactly with my own as to the healthiness of this season of the year, and as the river will in all probability form a highway to the interior healthy highlands, the entire absence of fever in the crew of the Pearl, among the men of the Hermes and members of the expedition is very satisfactory. The latter have been exposed to the influences of the climate of the delta for the last five weeks with impunity and, yet more, Capt. Bedingfeld, who has had, in addition to very hard work and much mental anxiety in working the MaRobert, enjoys good health and assures me that there is no comparison between this river and those on the West Coast. Feeling assured that your Lordship would value the opinion of one who knows the West Coast from ample experience, I herewith forward it in Enclosure No. 1. No 2 is of equal value.

Warned by the unhappy fate of the great Niger expedition, I selected May and June and July, the winter in this region, for ascending the river, as I considered health to be of more value than an easy passage up. Had we come three months sooner we should have had a full river but probably a sickly and disastrous commencement to our labours. At present we are all in good health and spirits and, having finished setting up our house and landing our luggage, we all look forward with interest to our first trip to Tette about a week hence. There we shall make our next depot and purpose to come down to the mouth of the Kongone on Christmas day next, to deliver and receive letters,¹ according to an arrangement we now propose to the Admiral at the Cape.

I beg leave to submit to your Lordship's judgment the propriety of sending out a small paddle-wheel steam vessel of from four to five feet draught to survey this river as far as the rapid of Kebrabasa above Tette. We have been quite unable to spend the requisite time on this important work. The Portuguese will never do it and, indeed, we have not met a single individual of that nation, since our arrival.² I am now borne out in the opinion that the river is navigable for such a vessel during seven or eight months of the year and there should be no risk to [the] health of the men employed: if she entered the river about the first of April she would greatly assist the

¹ to deliver and receive letters *added in the margin.*

² The sentence seems incomplete.

Expedition by communicating with us at Kebrabasa, surveying the river below and in the unhealthy season retiring to the Cape.

The faithful Makololo who accompanied me from the Interior still await my return at Tette, though many of them have died of smallpox, a disease unknown in their own country. I am informed that they have purchased goats, pigs and poultry and refuse to slaughter them till my return. The way into the region beyond Portuguese influence is thus still open and, when we have gone thither, it will be unadvisable for us to spend the time necessary for communicating with the coast. Captain Bedingfeld will have gained sufficient knowledge of the river by his frequent trips in the *MaRobert* to navigate the new vessel without risk while she is surveying and, if the vessel were made a part of the Expedition, no other Europeans would be necessary, except a Master and Engineer.

Should it be your Lordship's pleasure to approve of this suggestion, it occurs to me that the estimate given me by Sir Martin Peto for a steamer drawing four or five feet and capable of crossing the ocean and of which Captain Washington retained a copy, would be exactly what is required.

We commenced the use of quinine wine a few days before entering the delta and, the dose being just half the usual quantity, no case of cinchonism has appeared. I ascribe more to the time of the year than to the quinine but, having great faith in that invaluable remedy, I think it is important to let it be known the the bad effects so common after the usual dose may be avoided by diminishing the quantity, while probably its good effects are equally secured to those who are usually susceptible.

I am etc.

DAVID LIVINGSTONE

A true copy.

P.S. I forward by the Cape some botanical and geographical drawings by Mr Baines, our artist, for safe keeping; the former might be entrusted to the care of Sir W. Hooker¹ and the latter to Sir R. Murchison till the return of the Expedition.²

¹ Sir William Jackson Hooker (1758-1865), director of Kew Gardens, who in 1847 had founded, with John Stevens Henslow, a museum of economic botany.

² Here follow two pages, one blank, the other headed 'Steam Launch *MaRobert*, Zambesi, June 1858', perhaps the beginning of a transcript never carried through.

*Journal A.I*31st July, 1858¹

MY LORD,

It is with considerable regret I have to inform your Lordship that I have this day accepted the resignation of Commander Bedingfeld, a naval officer on half pay who was recommended by myself in reliance on the testimony of his friends as a suitable person for assisting this Expedition in the navigation of the Zambezi, for, if there was one thing that engaged my attention more than another in the selection of my companions, it was to secure those only whose previous experience of the discomforts of travel and whose good temper promised fair to (*word or words illegible*) from the beginning to the end of our enterprise. It is therefore very mortifying to have to report at this early stage the defection of one whose claims to the consideration of Her Majesty's Government for the appointment which he has repeatedly resigned consisted chiefly in my having been led to form a too favourable estimate² of his zeal and self-command. As soon as we began to encounter difficulties Cr. B. manifested unusual irritability of temper and, though free from the sea sickness which frequently prostrated him while on the ocean, he became exceedingly quarrelsome with the Captain of the Pearl and others and, on the very first occasion in which I felt it incumbent on me to interfere for the protection of the master of that vessel³ by simply stating, 'Captain Bedingfeld, I must have no more of these public altercations', he tendered his resignation.⁴

His first letter of resignation is here referred to as part of the history of the case only. It admits a consciousness of want of self-command, and, as I had often observed that change of climate produced an affection of the bowels which shews itself in foolish irritability of temper, I waited upwards of a week without once breaking on hitherto affable intercourse by referring to that letter and then, on Capt. Gordon of H.M.S. Hermes expressing to me his conviction that the resignation was only a temporary ebullition of anger, I gave B. leave to withdraw it. No sooner, however, did he get it into his hands than CR B. reasserted his belief that he had

¹ *Livingstone's marginal note:* 1st Part of Dispatch No 10 with six enclosures, Foreign Secretary, Lord Malmesbury, *The letter itself is obviously a first draft.*

² 'Estimate' is substituted for 'opinion' deleted.

³ Here the words 'he resigned' are deleted.

⁴ Resigned his command, *first reading deleted.*

been slighted, that I had not consulted him as I ought to have done, and that he had done quite right in writing the letter, but would insist on occupying a higher position in future. As this statement was accompanied by very bitter remarks about my having consulted Captain Duncan more than him, for which assertion he had absolutely no foundation, I tried to soothe him by assuring him that no such consultations had ever taken place except in his presence. And viewing the case from a medical point of view, both Dr Kirk and I entertained the hope that, as he became better in health, he would drop the air of wounded dignity with which he expatiated on 'not being treated as a man of his high standing and high salary ought to have been'. But this hope was not realized, for, in addition to a fifth public altercation with Captain Duncan in defiance of my express command, he assumed that, in having charge of the Steam Launch, he could act an independent part and arrange the vessel for his own private accomodation, irrespective of the claims of his companions. I should have been unworthy of the chief command had I allowed him to go on turning everything belonging to Dr Kirk and Mr Thornton, etc., out of the cabin simply because such may be done on board a man-of-war. So I requested him to ask those gentlemen before he treated their private luggage so unceremoniously. Conceiving his services to be indispensable Cr. B. thenceforward proceeded to thwart the progress of the Expedition while ostensibly anxious to promote it. I was extremely anxious to have my companions as soon as possible out of the Delta and, on consulting B. and Rae, the engineer, as to whether our removal up the river might not be hastened by putting some of our luggage in the Launch as well as in the pinnace which she towed, the former asserted that she could not carry anything while the latter, without knowing B's opinion, said that two or more tons in the fore and after compartments would steady the whole and, by diminishing the play of the connecting bolts, increase her durability. The healthy season was passing quickly away and, knowing that nine trips had been required to remove our¹ twenty-five tons of cargo from one stage to another, I did not hesitate to adopt Mr Rae's suggestion in part. In doing so I gave fresh offence to Cr. B., not now for want of consulting him but for not implicitly following his advice. From this period onward Cr. Bedingfeld was constantly carping, complaining and raising objections. No matter what plan was adopted, 'had it been left to him he would have done it better'. He found out even that it was better not to take quinine as we all did, for then he would receive

¹ Doubtful reading: ? over.

the full benefit of the remedy when he needed it. He threatened 'to write all home to his friends' and presented another letter which he said to Dr Kirk and myself was a letter containing his resignation, and asserted that he was sorry I had not accepted it. He subsequently expressed sorrow twice that I had not accepted his first resignation and allowed him to go home in the *Hermes*. To this letter he refers as if it had not been withdrawn. When to all this and much more of the same sort was added positive disobedience by declaring in the presence of Mr Thornton that he would have nothing to do with my order for making a systematic arrangement for the expenditure of the Kroomen's provisions, that I ought to have got a lighterman instead of a man in his high position. Paying no attention to my orders to have some system of cleansing the vessel daily and a performance of duty which, while it had the appearance of obedience, was actually its reverse, I was forced to the conclusion that, having borne to the utmost limits of endurance with a member apparently determined to act at cross purposes, the only means of preventing his bad example and continuous insinuations from producing the complete disorganization of the Expedition was to use the power which H.M.'s Government have honoured me with a view of anticipating a want felt severely in the late Niger Expedition and, accepting Cr. B's resignation, send him home to England.

Having come to the foregoing conclusion after anxious and mature consideration, I made arrangements with my friend Colonel Nunez of Kilimane to convey Cr. B. in safety to that port and to lodge him comfortably in the same room I occupied in 1856 and where he will have the company of two American merchants¹ till a man-of-war calls as, according to orders, one is expected to do every three months. I then delivered a formal acceptance of his resignation, on receiving which he commenced dancing and singing as if overjoyed, but probably for the sake of effect on the Kroomen, for he called them together and, on the evidence of his own statement to Mr Rae, he told them he would soon be out again at Sierra Leone in command of another man-of-war and would know to whom to give jobs. It is almost incredible that a naval officer would act such a part, but our minds were prepared for this, he having boasted that, 'if anything happens all the Kroomen will go with me'. Very much to the credit of these men that they came forward and stated before all the other members that they had been engaged by Govr Hill for Dr. L. and were ready to do whatever he ordered for two years. The Head Krooman added that on Governor Hill requesting him to choose eleven man-of-war's men, he found them readily but

¹ First reading: 'gentlemen', deleted.

when, by our arrival at Sierra Leone, it was known that Cr B. was to command them, all deserted except three. He had in consequence been obliged to take any he could find, though untaught, and he would do the best he could with them.

In order that your Lordship may form an opinion as to whether C.B's ideas respecting what he styled his proper position were reasonable or not, I beg leave to mention that, before leaving Liverpool, Captain Washington, the Hydrographer, very judiciously took the precaution of telling Captain Duncan of the Colonial vessel Pearl in the presence of Cr. B. and myself that no naval officer whatever would be allowed to interfere in the management of his vessel. This gave rise to continual grumbling on the part of B., as he thereby felt himself in some measure restrained. Apart from this I was fully aware of the obliging manner in which the Colonial Office had lent their vessel and I had a vivid impression of the inconvenience that would be experienced in both Foreign and Colonial Offices, should Capt. Duncan or I, through carelessness, cause the detention of the Pearl on the Zambesi till the floods of next year.

Captain Duncan had lately commanded the biggest steamer in the New York line, and, having accepted command of the Pearl on account of change of climate for the sake of his health, he entered with great zeal into the objects of the Expedition and was most anxious to get his vessel as far up as it would be prudent to go. When that which began in banter had ripened into hatred and each time the Pearl got into difficulty, Cr B. vented his spleen on Cp. D. before his crew, the latter behaved in such a dignified manner as to excite the admiration of all. When it was found that the river had fallen three or four feet and was fast going down, a public consultation was held with Cps Gordon, Duncan, Cr B. and Mr Skead and the officers of the Expedition. The case was stated fully and more especially how I was situated with respect to the vessel of the Colonial Office. All concurred in the plan which has since been followed and it remained for me only to add the opinions of the naval officers respecting the capabilities of the river for the guidance of your Lordship in relation to sending out a vessel otherwise circumstanced than the Pearl. In formulating these opinions, Cr. B. did not occupy a lower position than the other naval officers and I can appeal to my written instructions to him in evidence of my desire to treat him with all due consideration. He had a Krooman especially to attend to his wants¹ and was the only one of the Expedition so waited upon, the head of the party submitting to exactly the same inconveniences as his companions. But a

¹ *Marginal note:* Enclosure No. 1. Copy of Instructions.

continuance of deference to Cr. B. depended very much on his own efficiency. Sections 2, 3, 4, of my instructions to him before entering the river, in accordance with those of H.M. Govt, are explicit on the duty of sounding the Bars, viz. the Zambesi, and life boats, countermanded by himself for whalers, were built expressly for his safety. When, however, we came to the bar of the Luawe, he hung back, and it was sounded by C. Duncan in his ship, our naval officer quietly looking on and the whalers suspended on the sides of the Pearl. When we subsequently went to sound the Luabo, he did not refuse to go but shewed no inclination to encounter dangers and, as I have an invincible antipathy to force another into peril, who had my written orders in his hand, I went myself with Capt. Duncan and Mr Skead to do the duty. It was performed by these gentlemen from personal respect to myself, and very severe comments were made by the officers of the *Hermes* at Cm B. quietly remaining in the Launch in the Luawe. The bar of the Kongone was sounded by Mr Skead alone. After we had found a safe entrance into the main stream Cr B. did shew¹ some anxiety to sound the bar of the Timlene from the inside, as if to recover a position he would have occupied had he boldly done his duty.

According to the agreement signed by all the party before leaving England refusal to obey lawful orders may incur the immediate stoppage of pay and dismissal home. In addition to Cr B's resignation on the very first occasion in which I used my authority, I submit that, having given him an order before the other members not to engage in any more public altercations with Capt. Duncan, such resignation and subsequent ones expressed a determination not to render obedience. The determination was reduced to practice by a fresh altercation on or about the 27th June, when, according to the declarations of Captain Duncan, Mr Rae and Mr Livingstone,² he spoke in the most contemptuous manner and boasted that he would do what he could to prevent a lawful order from being obeyed. In section 5th of my instructions an order is given that from whatever point the return of the Pearl is decided on, the *MaRobert* will pilot her down to the sea. The above witnesses declare that he said, in a most insulting manner to Capt. Duncan, 'The Launch shall not go down if I can prevent it, not withstanding the Dr's promise', or words to that effect. Being absent at the time of this altercation I was surprised by Cr B asserting, somewhat earnestly, that the rivet heads were rusting off so fast that it would be quite unsafe to take her down to the sea, and that my promise was not binding in the circumstances. The

¹ 'shewed', first reading.

² For these see below, pp. 278-80.

country was in a state of war and the Pearl having the assistance of two naval officers, I begged Duncan to relieve me of my promise, which he did. Before I could communicate this to Cr B., he handed me a written protest, quoting the authority of Mr Rae in support of the rusting that it turns that¹ Mr Rae asked him not to use his name in saying there was aught the matter with them. The steel plates are a new invention and, believing that there might be some peculiar action in the metal that led to a failure, I requested Cr B. to shew me the rivet heads which were rusted off. He replied in an angry manner 'Do you think I would make a false statement? Look on the starboard and you will see them'. I did so and pared the paint off with a knife and though the white paint had a tinge of rust on the outside, the rivets had all the black scale of the fire on them, as indeed might have been expected after five weeks' usage only. On learning the particulars of the fifth altercation even from Cr B's own letter, it is painfully evident that both assertions to me and the written protest were made to prevent the Launch going down with the Pearl, and thereby verify his boast to Capt. Duncan. Two days' sail could not possibly have made any difference in the amount of rusting.

Having already adverted to the Kroomen whom I placed in Cr B's especial charge, I may be allowed to add that, feeling it to be a work of necessity to get the Expedition out of the Delta without loss of time, I worked on Sundays, except when we were all together on the island. Cr B. constituted himself an advocate for the Kroomen getting their proper time for meals and their Sundays. While professing anxiety to get these men up the river, he tried to excite these men to demand a stoppage for meals, a weekly day of rest and, coming to me, as if a deputation, he so put the case as to make them think that I had refused him and them a reasonable request. No such request having been made, I said so, and thus was considered by Cr B. as doubting his veracity and, besides telling me I 'was no gentleman', etc., etc., he again threatened to write all home to his friends, and with strict Sabbatarians he may make a good thing out of it. Calling to Dr Kirk to witness my simple denial of any previous application having been made, I explained to the Kroomen why I worked on Sundays and received the reply 'Whatever master say we do, we do.' And so ended Cr B's self-constituted advocacy of their wrongs.

In concluding the painful task of writing the first letter against another I ever penned, I must state that I am wholly unconscious of ever having entertained any personal dislike to Cr B. or shewed him

¹ So in the original.

any uncourteousness. I wrote him but one letter and, as this was deemed a gross insult, I enclose a copy.

I am

DAVID LIVINGSTONE
Consul
Commanding Zambesi Expedition¹

TETTE,² 1st Sept, 1858

I do hereby certify that I was present on board the Pearl on or about the 27th June 1858 and on or about that date heard Cr Bedingfeld speak to Captain Duncan in a most insulting manner before his officers and ship's company, and boast, among other things, that the Launch should *not* go down to the mouth of the river, notwithstanding the Dr's promise, if he could prevent it, and I am ready to declare the same if called upon.

And I also declare that, when on Expedition Island, I heard Cr Bedingfeld, in a very excited and angry manner openly say to you, Dr Livingstone, 'I have not had any true position since I have been in these rivers'. Also, to the best of my recollection, immediately afterwards, 'I am sorry my resignation was not accepted', adding something else which I did not hear distinctly. Then I heard you say to him, 'Very well; first put that in writing and I'll send you home by the first opportunity'.

I am, etc.

CHARLES LIVINGSTONE

To Dr L.

*Enclosure 1st.*³

ON BOARD *MaRobert*
OFF THE KONGONE MOUTH OF ZAMBESI
27th Sept, 1858

SIR, in answer to your letter of Aug. 26, I beg to make the following statement. When Cr Bedingfeld was at Expedition Island he spoke

¹ The Central African Archives contain two rough drafts of this dispatch. One Livingstone folded for transmission to a friend and wrote on the outside: 'Sent to shew my friend B. Braithwaite how much time and labour may be lost through kantankerousness. All this rough copy has been re-arranged and copied. Put it in the fire when done picking out any scraps of information it contains. It costs nothing.'

Neither rough draft adds anything new to other reports of the Bedingfeld affair.

² The ensuing three affirmations, by Charles Livingstone, Kirk and Thornton, are those mentioned above in Livingstone's dispatch of 31 July 1858. In the journal they occupy pages 225-31 and are in the Doctor's own hand.

³ So in the original.

to me on several occasions as to the light in which his conduct would be viewed in England and stated that he feared his resignation would be looked on as a wilful attempt to leave the Expedition without a naval officer at a time when it was impossible to obtain assistance. He expressed his willingness to continue the navigation until such time as a successor could be found. The statement which I signed at his request was simply that Capt. Bedingfeld expressed himself willing to continue in office.

As you have also requested me to make a report on the state in which the Launch was when given over, I can state that, on raising the deck gratings, we found an accumulation of filth which had not been removed for some time and which was in a putrid state from the water dashed in by the paddles.

I consider the acceptance of Capn Bedingfeld's resignation as necessary, under the circumstances, to prevent further disorganization of the Expedition.

I am etc.,

JOHN KIRK M.D.
Zambesi Expedition

Dr Livingstone.

H.M. Consul and commander of the Expedition.

A true copy. David Livingstone.

KONGONE RIVER,
29th September, 1858

DEAR SIR,

At your request I write you the following evidence.

I was present in the cabin of the MaRobert when Commander Bedingfeld, in reply to your requesting him to see that the Kroomen were put on the proper allowance of their provisions, replied, to the best of my recollection, that it was not his business to look after the Kroomen's provisions, adding that Dr Livingstone had better get a lighterman to do his work than an officer in his position; and afterwards said that Dr L. had lumbered up his cabin (with Expedition stores and cargo) until it was not fit for a gentleman to enter.

Having been a good deal with Cpt Bedingfeld in the Launch, it is my opinion that his ceasing to be a member of the Expedition was decidedly for the good of the Expedition. Not only was he dissatisfied himself but tried to make other members of the Expedition so also, and I feel quite sure that, had he his own way,

not more than half the stores would yet have left Expedition Island.

I am your most obedient servant

RICHARD THORNTON

SHUPANGA, 6th¹ August, 1858

MY LORD,

Having accepted the resignation of Cr B. on the 31st July, as detailed in the first part of the present despatch, I took charge of the Steam Launch myself and went from Expedition Island to Shupanga with a heavier load and in a shorter time than had ever been done before and this was the first trip in which she never once touched the ground. On our return Dr Kirk, now the second in command, took charge and was equally successful, and, as we were guided in our navigation by a very accurate chart made by Mr Thornton, we have decidedly gained in the loss of Cr B's services. His object in navigating so badly was evidently to make me feel that, unless he had the entire control of everything, the Expedition could not be successful. When the vessel ran aground anchors were laid out, manilla ropes uncoiled and a process gone through which would have been all right in the case of a Frigate but quite inappropriate here, where all that is necessary is to call the hands aft, give a back turn of the engine and she is off [in] three minutes, where Cr B. would have had her in three hours. Cr B's conduct subsequent to his resignation proves that there is nothing uncharitable in what I state to your Lordship. He seemed quite certain that we could not navigate the steamer: hence the 'dancing and singing'. But when Dr Kirk and I returned from the first trip in a shorter time than he had ever done, his conduct was changed to tactics to secure his pay. Assured us that he was still a member of the Expedition by calling himself only suspended from duty: he applied for a sextant, artificial horizon, chronometer, etc., etc., as he intended to make observations during the time he should be in the country. As he had made no observations except only a dozen latitudes when he had free use of the instruments, and even spoke with contempt of Mr Skead's admirable zeal in observing as 'that old fool shewing off' and had, moreover, lately allowed two chronometers to run down and set a-going without making a note of the event, besides permitting two of them, while in his charge in England, to fall in a railway carriage, I did not think myself justified in lending instruments furnished to members of the expedition to a private individual, the more especially as that might

¹ Marginal note in Livingstone's writing: No. 10. Second part, with seven enclosures.

have given him a claim to his pay, and the loss of that was the only thing that brought him to his senses.

Cr B. attempted also to complicate the matter by reporting his case through me to the Governor at the Cape and for this purpose applied for a copy of his agreement which he signed in London to the effect that refusal to obey lawful orders might incur immediate stoppage of pay and dismissal from the Expedition. I intended to have given the copy but, being formally made aware of the purpose for which it was intended, I considered that it would be improper in me to send the case any where except through the Foreign Office. I therefore declined to give the document and at the same time informed him that I should furnish your Lordship with proofs of his having tendered his resignation and also broken the agreement. His pay was therefore stopped on the 31st July and, as he received half a year's salary in advance before leaving England, should your Lordship approve of what I have done, Cr B. has now no claims on Her Majesty's Government.

Cr B. next applied to Dr Kirk, Mr Baines the store keeper and Mr Rae the engineer to sign a paper stating that they had never heard him disobey any lawful orders. This they refused to do. He then begged the former gentlemen to second by their signatures his own statement of willingness to go on with the Expedition until the arrival of another officer from England. This they complied with, but as he at the same time presented a blank paper to Mr Rae to sign and stated that Dr Kirk and Mr Baines had signed it, I beg leave respectfully to suggest caution lest any other line may have been added than what I have stated. This precaution may be unnecessary, but Cr B. having failed to write anything for the Public Journal and, when requested to do so, declared before witnesses that he never had any time to write, yet, after the acceptance of his resignation on 31st July, he borrowed the private journal of Mr Baines and wrote a document purporting to be a Log kept on board the Launch. It contains internal evidence of having been written not on the dates assigned but long afterwards. He refers, for instance, on the 11th June, to what was said on 24 July, quite unnecessarily adding, 'He afterwards (24th July) informed me that he had kept a copy of it.'

This so-called Log, as might have been expected, is written, if I may use the expression, *at me*, and I submit it to your Lordship's judgment as containing the worst that could be said against my conduct and as containing his own statement that he had again resigned an appointment for the salary of which he seems now determined to make a strenuous effort. I must at the same time pointedly deny

that I ever adopted 'a system of persecution' or that my manners were ever insulting and aggressive. I have got on well with even the most degraded of the African tribes, with the Portuguese and with all the other members because of the habit of paying due deference to their feelings. And I respectfully protest against words employed in frank social intercourse being understood or studied insults.¹ He stood grumbling before the crew at our going on at sunrise and declaring that, if all had been left to his guidance, matters would have been much better managed. I said to him, in the most earnest manner, 'You know how anxious I am about our companions left alone on the island, and I beg of you to act now as we intended to do in England'.

He replied, as he confesses in his 'Log', that he was sorry I had not accepted his resignation: 'Now I do beg of you to do your duty in a manly way, for writing long official letters to each other is more like boarding school girls in a pet than like men engaged in a great work'. I was so far from being insulting in manner that I thought he would yield to my earnest entreaty, and though no coward, I had no inclination to encounter a man who frequently boasted that, when formerly tried by court martials, the newspapers took up his case. I was anxious to avoid being publicly criticised for working on Sundays where no explanation can be given and by one who seemed determined to be a persecuted man to make capital therefrom; but the act of dismissal was forced upon me, and his last act in writing a 'Log', wherein he has the hardihood to change sides, making himself the individual anxious to hasten on the Expedition, and me the person perversely bent on hindering its progress, together with the fact that Dr Kirk, Mr Thornton, Mr Livingstone and Mr Rae cordially approve the step I took, all assuring me that I have only done my duty. I beg your Lordship's attention to the statements of the first two of these gentlemen and leave the whole to the decision of your Lordship's judgment.

I am etc.

DAVID LIVINGSTONE

Copy.

P.S. It has occurred to me, since writing the foregoing, that at the very time Cr Bedingfeld was declaring that I had adopted a system

¹ Here follows a passage crossed out by Livingstone: 'When, for instance, I said to him in the most earnest manner, "I beg of you, Captain B., to act now as we intended to do in England; for writing long official letters to each other, instead of doing our duty in a manly way, is more like boarding-school girls in a pet than the conduct of men engaged in a great work." I repeated "I beg of you" several times.'

of insult and persecution from a determination to get rid of him, I wrote in dispatch 8 or 9 a recommendation to your Lordship to give him the command of another vessel, should it be advisable to send one out and, in a private letter to Sir George Grey, published in the Cape papers, I spoke of him with approbation. This shews a different state of mind from what he suspected.

A vessel named the *Ban*,¹ now or lately lying unemployed at Woolwich, was offered for the use of this Expedition. I paid so much deference to Cr B's judgment that, though it draws only three feet and would navigate this river during at least ten months in the year, I allowed its rejection. It would have taken all our luggage as easily² as this *Launch* did, according to Cr B's arrangement in nine trips, and according to my own arrangement in five trips. It is questionable whether Cr B's seasickness, which he says grows upon him, would have permitted him to navigate her out. On the grounds of having formerly been misled, I beg leave to apply again for the *Ban* or any other suitable vessel, the officer in charge having no higher rank than second master and capable of surveying. The mouths of the Zambesi are still unexplored. The *Lynx* found the bar of the Luabo better than the Kongone, while in our hurried visit no entrance could be discovered.

I am etc.

DAVID LIVINGSTONE

No. II.

TETTE, 10th Sept, 1858

MY LORD,

My attention having been called in an article in the *Times* to the question whether the cultivation of cotton in Africa on an extended scale would not involve the transference of the evils of the slave system from one country to another, and the Editor having signified his desire to hear my opinion on the subject, I replied in a letter which he did me the honour to insert and gave what information I had collected, though my inquiries had not been specially directed to the question. When formerly in Africa I was ignorant of the cotton and sugar supply question, and had no idea that the opinion was held by many that these articles of produce could only be supplied by large slave institutions. Now that I am on the spot, as it may be improper in a public servant to write directly to the Newspapers; I beg leave to submit the result of my enquiries to your Lordship.

We found the country in a state of war or rebellion and the North

¹ Elsewhere, e.g. p. 283, spelled *Bann*.

² 'as easily as easily' in the original.

bank of the river being occupied by the rebels, no commerce had been carried on between the Interior and the coast for the last ten months. We were warned by the Portuguese not to trust their enemies, as they would be sure to plunder us: but as soon as they understood that we were English they received us with kindness. The North bank between Mazaro and Senna had guard-houses and sentinels placed at convenient distances and once, [when] we anchored off one at night, the sentinel fired his gun and raised the alarm: but no sooner did they hear that we were Englishmen than they called out, 'It is good, good, good'. The best channel lay on that side, so we had frequent intercourse in passing up and down, and had an opportunity of observing from the brands on their chests that a very large majority of the common people were runaway slaves. This was only a confirmation of what the Portuguese told us in explanation of the necessity of the war. The rebel party had been offered pardon if they delivered up their arms, but declined to do so unless their headman, Mariano, now a prisoner in Mosambique, were returned to them. As yielding up their arms might have implied delivering up the fugitive slaves, the chief source of the rebel power, there was no hope of ending the war in that way. So the Governor of Kilimane came up with all the forces he could collect to do so by fighting. We happened to be near Mazaro at the very time the first battle was fought but, though near, a dense fog prevented our hearing the firing. On landing among Portuguese soldiers and native troops we saw mutilated bodies and heads lying about among their feet. The officers informed me that the Governor was very ill of fever and begged me to take him across to Shupanga on the other side of the river. Firing then began pretty close at hand and, all being confusion among the servants, I could get no one to carry the sick man. Sending to the Launch for some of our own men, the messenger thought only of his own safety and, as the balls began to whistle about, I took him up myself and was afterwards aided by a sergeant in getting him to the bank. The fugitives fought pretty well and pressed the Portuguese so hard as to carry off a good deal of luggage. It is impossible for a stranger to enter into the feelings of contending parties. No European could well enter into ours in the case of the Indian Mutiny, so I do not pretend to judge either party, but give the fact of a large force composed chiefly of fugitive slaves fighting against their former masters. And when I add to that the stockade at the confluence of the Luenya is another nucleus for runaways,¹ which at will commands the navigation of the river, and also that on the

¹ 'for runaway for runaways' so in the original.

North of Tette the chief power is in the hands of another half-caste foreigner whose power was formed from the same material, it will appear evident that large slave establishments on the plan of the American institutions could not here long subsist.

If we turn to the independent tribes on the southern bank, called Landeens, a runaway slave will not be delivered up at all. I have heard of one case only to the contrary, and then the master paid them his full value. On talking to some of my friends here and at Senna on the subject, they confessed that they had but little power over their slaves and professed a willingness to give up all they owned if their Government would pay from ten to fifteen dollars per head, though, to test them, I asked if they had any objections to their statement being published. A change would be attended with many inconveniences to the present race of slave-holders, but it is evident that they are not of the opinion that the system of compulsory labour is an advantageous one.

Enquiries among those best acquainted with the country as to what prospects there are of free people cultivating cotton for sale, the prompt answer was, 'Certainly, if they find it their interest to do so. They now work hard in raising provisions at a very cheap rate, and many of them cultivate cotton for their own use and, if they know it would be purchased, would raise more.' Others replied that the negro wants were so few that they would not cultivate it in any quantity, and expatiated freely on the awful laziness of the blacks.

The latter opinion may be obtained any day from any one you may see lying on his back smoking. On looking around on my Portuguese acquaintance, I observe that all those possessed of energy are rich, while those most alive to the evils of negro laziness are poor.

The cotton grown in this country is of two kinds, that called Tonje manja, as the added adjective implies, is an imported variety and in the delta has a very fine long staple. The other, Tonje caja, is native and has a very strong short pile which clings to the seed and feels more like wool in the hand than cotton. Native cloth of this is very highly valued. Those who think that negro wants are all supplied when he gets a bit of wretched calico about him should try the effect of a bait in the shape of a strong Manchester cloth made in imitation of these country cloths, and it will be found that human nature differs but little though the skin does.

Patches of cotton a few yards square are seen in most native gardens and the plant is met with in forests where the grass is annually burned off, as though, when once introduced, the soil and the climate were so favourable that they could maintain their own

Four years ago the whole of the lower part of the Zambesi was well peopled and any amount of grain and other produce¹ could be obtained at a remarkably cheap rate, but wars have driven away or destroyed the population and the only evidence we now see of it, is occasionally clumps of Mango and Tamarind tree blighted or a coffee tree in blossom: and [I] was informed that a foolish prejudice prevails in the country that he who cultivates coffee cannot enjoy happiness. Sugar is manufactured at Tette but, the process being rude, it is of an inferior quality. And at plantations adjacent to Kilimane the cane grows almost wild. Yet no use is made of it in manufacture. We propose to make our first experiment in cotton and sugar cane at a small plot of land a mile or two above Tette which, with a house, has been lent us by Major Secard, the commandant. This gentleman has kindly undertaken to carry up a small engine and sugar mill to Tette and a quantity of luggage too. He has also lent the Expedition the half of the Governor's house free of all charge, and I intend to avail myself of his kindness in the way of sheltering my companions during the unhealthy months about the beginning of 1859. As I have elsewhere observed, it is to this gentleman we owe the prompt response to dig the first coals ever used in this country, and I feel deeply grateful to him for the paternal care and generosity with which he watched over my men² during my protracted stay in England. About thirty of them were cut off by smallpox, a disease unknown in their own land, and six had been killed by the rebel chief at the confluence of the Luenya—it is said in a fit of drunkenness. On landing among them for the first time the poor fellows could not contain their joy, but gave vent to it in hillilooing and grasping my hands and arms. They said 'the Tette people often taunted us by saying, "your Englishman will never return", but we trusted you and now we shall sleep'. They have amassed considerable quantities of beads by woodcutting, to take back to their own country. It is curious to note that about half a dozen of them are afflicted with moon blindness, for, that being unknown in the high interior lands, shews that the moon has some influence over the malaria which exists here. I have given each of them a present of cloth from that supplied to the Expedition.

In endeavouring to open up the Interior of Africa the fever obviously requires the greatest consideration. I shall therefore mention the precautions we have employed to escape its deadly power. We have, with one exception, continued the daily use of quinine ever since we entered the river. We have not been able to detect from its long continued use any such effect as our Homoeo-

¹ and other produce: *marginal addition.*

² The Makololo.

pathic friends would lead us to expect: but we can at any time, by an extra dose or two, produce cinchonism (deafness, ringing in the ears, etc.,) shewing the system to be fully under the influence of the remedy. Several have had bouts of illness which seemed violent colds, and in one case a slight sunstroke: but no one had been prostrated by coast fever. One precaution employed I would strongly recommend in all cases, never to spend a day without working when surrounded by Mangrove swamps.

When the Great Niger Expedition was in a similar situation, if I am rightly informed, the Sundays were properly observed, and time was also spent in the daily observance of reading public papers. When we first anchored in the mouth of the Luawe, close under a Mangrove swamp of great extent, although it would have been more agreeable to my own feelings to have observed the next day (Sunday) as one of rest, after asking the consent of the men, I at once proceeded with all vigour to get out the Launch, so as to leave the hot-bed of fever we were in without a moment's delay. After the experience gained by Dr McWilliam¹ and communicated to the world in his admirable 'Medical History of the Niger Expedition', I should have considered myself personally guilty had any of the crew of the Pearl or of the Expedition been cut off by delay in the Mangrove swamps. The delta is also unhealthy, but the upper parts, and indeed all this river, possesses a peculiarity quite unknown in Western Africa: there is a wonderful prevalence of sand over mud. Islands are formed of pure sand and, taking the bottom of the river generally and all the banks exposed to the sun's rays, four-fifths of the material may be pronounced to be pure sand. This may be the reason of the greater healthiness of the higher parts of the delta. The parts near the sea covered with Mangrove are pure and excessively adhesive mud.

The Governor of Kilimane informed me that his Government had sent out from Lisbon a brig of war, the Villa da Flor, to survey the mouth of the Luabo and erect a fort to serve as a customs house there. On asking my opinion as to the suitability of the Luabo for the purpose, I explained the impossibility of the bar there being used for navigation and pointed on the Kongone as preferable. None of the Portuguese could give him² any information about it,

¹ James Ormiston McWilliam (1808-62), appointed a surgeon in the Navy in 1830, and in 1840 was made senior surgeon on the *Albert*, one of the ships which joined the Niger expedition. When fever broke out in the party his measures saved his own ship's company, though the expedition had to return home in 1841. His *Medical History of the Niger Expedition* appeared in 1843.

² *Marginal note:* The Lynx has visited it since we did and Capt. Berkeley thinks the bar good.

possibly because it is hidden by an island in the entrance. In conversation with him I explained how undesirable it would be to place any restriction on commerce and particularly where a ship, on entering with a view to developing a trade, would be sure of only one thing, and that the payment of custom house expenses. He did not relish the idea of making the Zambesi free, though only for a limited time.

The Portuguese Governor of Mosambique has formally approved of my being Consul in the district of Kilimane and Mr Dupratt, the Portuguese commissioner at the Cape, informed me that H.M.F. Majesty was most desirous of receiving any information about the country I might be able to communicate. I have¹ thought the best way would be to apply to your Lordship. My old friends Col. Nunez, Major Secard, Senr Ferrão and Isidore [and] Azevedo² treat all members of the Expedition with the same kindness as they do myself. There has not hitherto been a single jar either with them or among ourselves.³

The order sent by the Government of Portugal to support my men at the public expense of the Treasury of Mosambique shewed a very friendly disposition, but the Portuguese⁴ cannot pay its own officers, though it costs the mother country £5,000 annually. So my late companions have been chiefly indebted to the generosity of Major Secard and their own industry for subsistence. The Major and Col. Nunez are the most public spirited men in the country and I hope that the former may be continued in his command.

KONGONE RIVER, 2 Oct

After receiving a ton and a half of coals, a report of which I enclose,⁵ we came down in four days to Senna and found the war finished by the capture of the stockade of Mariano. The rebels had fled to the mountains. The Governor requested a passage down to Shupanga and there presented a written testimonial conceived in very flattering terms for Dr Kirk for his services in curing the sick and wounded of the army during my absence. Two officers of H.M.S. Lynx had come up to inform us that she had brought stores we expected at Christmas, so I followed Dr Kirk, who had

¹ The rest of this sentence originally ran : ' not given any, as it would perhaps come better from your Lordship in communications with the Court of Lisbon than from any one.'

² *Azevedo's name is added in the margin.*

³ *This sentence is a marginal addition.*

⁵ *Marginal note: Separate, Thornton's report.*

⁴ *I.e. the Portuguese Government.*

already gone down with canoes lent by the Governor, to bring them up. Mr Medlicott, the mate of the Lynx, navigated the MaRobert down and enabled me to write despatches.

On coming down, I found that the bar of the Luabo had been mistaken for this, and a boat and some men lost in it. Though it is considered by the officers better than what I have reported it to be to your Lordship, I suggested to Captain Berkeley of the Lynx the propriety of erecting an inexpensive beacon consisting of three trees and a white painted cask on the island at the entrance of the Kongone; and he has promptly engaged to do so. Captain Berkeley and Mr Medlicott and Mr Mandeville were all anxious to occupy Cr Bedingfeld's place. Mr Medlicott shewed great tact in navigating the river, but I did not feel at liberty to accept of his services. I applied to Cn Berkeley for a quarter-master and a steward and two very good hands having readily¹ [volunteered], I have promised each double full pay. The quartermaster will then, if the step receives your Lordship's sanction, be entitled to £72 per annum and the other about £84.² No new grant is required for this, as Cr B's resignation saves £450 per annum, his half pay having been augmented to double commander's full pay or £600 per Annum. There is no necessity for another naval officer being sent out, except for surveying. The quartermaster will do all we require and should it be deemed necessary to have another non-surveying officer, several are most anxious to volunteer from the Cape Station. But if my unfortunate experience were to have any influence, another naval commander would be a decidedly useless ornament to the Expedition.

Having been obliged to lend some of the Expedition money on hand to the Pearl³ on leaving the Zambesi, in order to purchase fresh provisions at Johanna, and having incurred some expense in providing for Cr Bedingfeld's conveyance to Kilimane and lodging there, and having also received some stores by the Lynx which we ordered for Christmas, I have taken the liberty of drawing one hundred and five Pounds from the funds of the Expedition through Sir George Grey's colonial agent and I hope it will not again be necessary to do so during the next twelve months. Our intended visit to this part on Christmas day is postponed.

I am etc.

DAVID LIVINGSTONE

¹ Between the end of one page and the beginning of the next, a word like 'volunteered' has been omitted.

² A marginal correction: in the body of the dispatch the sum is £50, *deleted*.

³ So in the original.

KONGONE RIVER,¹
30th Sept., 1858
H.M.S. *Lynx*

DEAR SIR,

I feel great pleasure in acquainting you that I have on Ten occasions crossed and sounded the (Catherina Bar) entrance of the Main direct Channel of the Great Zambesi River and the least water obtained on the *Bar*, at Low Water, was 9 feet (Rise and fall 12 to 15 feet) deepening gradually to 3 Fms on either side. The entrance, between the line of Breakers, in a *Boat*, is at times difficult to define, but from a more elevated position, is at *all* times clearly discernable (as from the Main Brace of a Ship). A good mark for the line of entrance thro' Breakers, is a Double Clump of Trees (the only one) on Eastern Shore, a Ship's Length open of First Bluff Tree Point on Western Shore. The deepest water inclines towards the Eastern Entrance, keeping the Sand Is. close onboard, until abreast of the highest part, when a Course must be shaped to clear First Bluff Tree Point. Good and safe anchorage is to be had $\frac{1}{2}$ to $\frac{3}{4}$ of a mile inside of it, in from 4 to $4\frac{1}{2}$ fms, having casually sounded as far as the Creek from whence the Pearl entered the Zambesi.

I am pretty confidently² that a good passage exists to that point: in many places 6 to 8 and 10 Fms, can be found. The Bank being steep a ship may rub her sides against it. Wood for Fuel is easily obtainable; a plank from ship to shore, with a few good Saws etc, a ship-load might be had in a few hours. The Natives were very communicative and have tollerable good supplies of Fish and Vegetables. Fruit in abundance is to be had when in Season, all of which they will barter for Cloth, etc. The best time for *Boats* entering or leaving the River is from Half Flood to High Water, the Ebb causing, from the great rush of Water into the Sea, a troubled and, at times, a nasty cross swell for Vessels of light draught carrying 10 to 12 feet.

The Channel of the Great Zambesi River is ALWAYS available and [? renders] this of great importance to Navigation and Commerce at large, and particularly to the Expedition, for a direct communication at all times from Seaward. I deeply regret I had not the means or the Instruments for making a Survey of it: (had I done so I would gladly have furnished you with it). I had the great pleasure of Dr Kirk's company when crossing the Bar on two occasions, and his valuable assistance and ready aid was always obtainable, which I have much pleasure in testifying to. Should there be anything

¹ Written in a good clerly hand by the Second Master, R. Cooke.

² So in the original.

that I can serve you personally or the Expedition under your Charge, you have only to ask, and I shall deem it a great pleasure in serving you.

Yours sincerely

R. COOKE

Second Master in Charge

P.S. The Musebo (in Admiralty Chart) I have in company with Mr M. B. Medlycott sounded and will furnish you with particulars as soon as possible.

R. C.

TETTE, 17th December, 1858

The Right Honourable
Lord Malmesbury.

No. 12.

MY LORD,

All the members of the Expedition having been comfortably lodged about the beginning of November last in the house of Commandant Secard which he kindly gave up to our use, it seemed advisable that the rapids of Kebrabasa should be examined while the water in the Zambesi was still at its lowest. They were not seen by me in 1856 and, strange as it may appear, no one else could be found¹ who could give any account of any part except the commencement about 30 miles above this. The only person who had possessed curiosity enough to ascend a few miles described it as a number of detached rocks jutting out across the streams, rendering the channel tortuous and dangerous. The Portuguese in former times seem to have been equally indifferent, for their writers having all been no nearer the countries described than the coast, have trusted to oral information, and that has been invariably as vague as we found it much nearer to the spot. A mountain named Panda Maboia (Copper Mountain), a mass of (*word illegible*) marble at the top, contains points of the green carbonate of copper which is said to have been worked—hence the name—stretches out towards the range of hills on the Eastern bank so as to narrow the river to 60 or 80 yards. This is the commencement of Kebra—or more correctly—Kaora-basa. We went about four miles beyond Panda Maboia in this little steamer, and soon saw that the difficulty is caused by the Zambesi being confined by mountains to a bed scarcely a quarter of a mile broad. This bed, viewed from a height, appears covered with huge blocks of rock interspersed with great

¹ Who could be found, *repeated*.

rounded boulders. Large patches¹ of the underlying rock, which is porphyry and various metamorphic masses huddled together in wild confusion and also some on the surface, and winding from side to side. In this upper bed there is a deep narrow groove in which as we were steaming up, the usual call from the man at the lead was 'no bottom at ten fathoms' (60 feet). Though the perpendicular sides of this channel are generally of porphyry or syenite, they are ground into deep pot-holes and drilled into numerous vertical grooves similar to those in Eastern wells where the draw-rope has been in use for ages: (*word illegible*) shews the wearing power of the water when the river is full. The breadth of this channel was from 30 to 60 yards and its walls at low water from 30 to 80 feet high. At six or seven points there are rocky islands in it which divide the water into two or three channels for short distances.

The current which we found generally gentle increased in force at these points to four or five knots and, as our vessel has only a single engine of ten horse power, it can scarcely stem that amount in open water, and besides being of an extremely awkward and unhandy 'canoe-form', is only one sixteenth of an inch in thickness: it is evident that we cannot risk her in any but the gentlest current. The attempt to haul her through would have doubled her up, so we left her at the beginning of the first rapid and went forward to examine the parts above on foot. The usual course traders have pursued is to come to a point below where we left the steamer in canoes, and leaving them there, go overland through the level Shidiwa country well away from the mountains which skirt the river: and when they reported an impediment they referred to the unwieldy canoes only in common use on the lower part of the Zambesi. These cannot paddle against a four-knot stream, nor can they punt at a depth of 60 feet, nor tow along a wall often 80 feet high and always smooth, slippery or jagged. But though there is an impediment to canoe navigation it would prove none during four or five months each year to a steamer capable of going twelve or fourteen knots an hour.

With Dr Kirk, Mr Rae and some Makololo² in company, we marched about twelve miles nearly north from the entrance at Panda-Maboa. The upper bed in which we were travelling was exceedingly rough, but we occasionally got glances of the river at the bottom of the groove and saw four rapids.

The people having all fled from some marauding party, we could get neither provisions nor information, (*word illegible*)

¹ *Marginal note:* See sketch by Mr Baines, separate in oil box. The text here is indistinct.

² *Marginal note:* See sketch map by Dr Kirk: Enclosure No. 1.

returned in order to organize a regular exploration of the whole difficulty.

Major Secard, having found out that a native Portuguese, Sr José Santos Anna, had when young, hunted elephants among the mountains which confine the Zambesi, engaged him to accompany us on our second expedition, which consisted of the seven members of our party and ten Makololo. Leaving the steamer at a safe spot above Panda Maboia, we proceeded up the left bank, the different members pursuing their several avocations as much as the roughness of the march would allow; a careful sketch¹ and photograph² were made of the worst rapid we had then seen. There was a fall of about five feet in twenty yards,³ but on our return a rise of the river of between three and four feet had made it nearly level.

Crossing the Lui, a small river coming into the Zambesi from the North (East Lat. $15^{\circ} 37' S$), we turned westwards and soon reached the beginning of the range Shiperizioa⁴ which, without knowing the name, we had previously seen. This part of the river our guide had only once seen from a distant mountain, and supposed what was now only a small and by no means steep rapid to be a large waterfall, the range Shiperizioa appearing to end in a fine peak at least 2300 feet high. We resolved to ascend it and get a view of the river beyond. A hippopotamus having been killed, a party was left to cut up the meat while we went on to the peak. It was found inaccessible from the river side. It forms the most prominent feature in the landscape and we thought it right to pay a compliment to our Portuguese friends by naming it 'Mount Stephanie' after their young Queen.

As our guide, Sr José, had hunted all along the river to Chicova and a party of natives who came to beg meat agreed with him in asserting that no waterfall existed above Mount 'Stephanie', we began our return to the steamer, but after one day's march homewards, one of the Makololo mentioned that he had received information of the existence of a worse cataract than any we had seen, and that, too, from one of the aforementioned party of natives. It was at once resolved that Mr Kirk and I should return and verify this, while the rest of the party worked their way downwards. Accompanied by four Makololo we now proceeded by the back or northern side of Mount Stephanie, and were fortunate enough to find a village situated in a beautiful valley with a fine stream of

¹ *Marginal note:* No 3 in water colour by Mr Baines. Separate.

² *Marginal note:* Photograph by Mr C. Livingstone.

³ *Marginal note:* No 4 a small sketch of rapid above. Separate.

⁴ In the map appended to Livingstone's *Narrative* this name is given as Chiperiziwa.

water running through it. The people are called Badema and, though mountaineers, possess but little of the brave character which we are accustomed to ascribe to such people. They generally flee from strangers, their gardens were sown on the highest parts of the mountains, some of them on slopes at an angle of 70° where there is very little soil. They cultivate the native cotton in preference to the imported, as the former, though yielding less, has by far the strongest fibre, and the plants continue yielding annually, even though burnt down to the ground. They support the branches which remain by trellis work, as we do grape vines.

Their looms are of the most primitive description, but they value the cloth made from them much more than they do our more beautifully woven fabrics. Zandia, the headman of this village, furnished us with two guides to take us to Pajodzi, the point to which canoes are accustomed to descend, for, though he asserted that there was no waterfall, we considered it our duty to see all the difficult parts by descending from that point before reporting to H.M.'s Government.

The next village we came to gave a totally different account. The men asserted that there was a waterfall so frightful as to be perfectly unapproachable. 'No Elephant had ever gone near it, nor hippopotamus, nor even an alligator could reach it, and a man might perish of thirst, in sight of it but unable to approach it.' On asking how they happened to get near the frightful abyss, they replied that it was accessible from the other side. They had a political reason for not shewing us the river. The Banyai on the opposite lands (Shidima)¹ have been in the habit of extracting large payments from the traders for leave to pass. Eighty fathoms of calico are sometimes paid to a single village, and the villagers here were afraid that blame would be imputed by the Banyai to them in the event of our opening a path whereby their exactions would be avoided. By insisting that our two guides from Zandia should fulfil their bargain, they went out, but led us to a point near Mount *Stephanie* where, emerging from the mountains, we found ourselves a good thousand feet above the Zambesi. The mountains on both sides slope at a high angle down to the water and there is no upper or flooded bed. The water, about 300 yards broad, appeared to us, at the height we first saw it, not more than a third of this width. The guides pointed to a rapid, caused by two rocks about eight feet high in the middle of the stream, as the waterfall, but, refusing to credit them, we resolved to go up along the bank westward. In descending to the water's edge we found the steep sloping bank

¹ The map in the *Narrative* reads 'Banyai Country called Shidima'.

covered with enormous boulders with a black glaze, as if they had recently been smeared with tar. Whenever the water flows over rocks for a long time this peculiar glaze appears. It has been observed in the Congo and has been mentioned by Humboldt in the Orinoco. The guides declared that it was totally impossible to go farther, though their soles were furnished with a thick cracked skin similar to that of the Elephant; the marks of the cracks were visible on the sand they trod upon.

The Makololo headmen, very willing fellows, shewed me their feet, on which the blisters were broken by the hot rocks over which we had climbed, and said that they were fairly done up, that it was evident the villagers magnified the difficulty from political motives, and that there were no impediments save such as we had already seen. On urging them to make another effort, they said that they always imagined I had a heart till then. They were sorry Kirk could not understand them, for he would acquiesce in their views and go back. I surely had become insane; and next day they endeavoured by signs to induce him to return. Leaving them there, Dr Kirk and I went on alone, but, while striving with all our might, we could not make more than one mile in three hours. It was in truth the worst tract I ever travelled over. Our strong new English boots were worn through the soles. The sun's rays were converted by the converging hills into a sort of focus, and the stones were so hot the hand could not be held on them for a moment, though we were in danger of being dashed down into the [*word illegible*] by letting go for an instant. The reflection from the rocks felt exactly like the breath of a furnace: I felt sure that if I had come down this way in 1856, instead of through the level Shidima country, I should have perished before reaching Tette; for now, with but a fortnight's experience and an examination of about 30 miles, we all returned as lean and haggard as if we had been recovering from severe illness. One of the Makololo came up to¹ in the afternoon and, seeing further progress to be impracticable, we were returning, when we met the rest of the party. After sleeping among the hot rocks, where no covering is necessary, we next day induced the guides and Makololo to go on, though the spurs from the mountain, along whose flank we were toiling, became perpendicular cliffs, requiring a great deal of dangerous climbing to get past. In the afternoon we were rewarded by the sight of a cataract called Morumbua, the only one we had seen deserving the name. On both sides there are perpendicular walls of rock, along the face of which no towing could be carried. The

¹ So in the original.

inaccessible sides are 500 to 600 feet high. The cataract itself presents a fall (as nearly as we could guess at a distance of 600 yards) of 30 feet and the water comes down at an angle of 30° . When the river is full it is at least eighty feet (80) higher than when we saw it and no cataract is visible at the place we saw the broken waters. We stood in a pot-hole and dropped down a measuring tape fifty-three feet to the level of the water in flood. The river at that same pot-hole is at least 30 feet deep.

We witnessed on our return the effect of a three feet rise in rendering a cataract already mentioned of five feet nearly level. It is quite a moderate computation to say the perpendicular rise among the hills is eighty feet: this, while it obliterates some rapids, will in all probability give rise to others, and the disparity of statements among the natives may partially be accounted for by their having seen the river at different stages of flood.

Resolving to return and examine the whole when the river is in full flood in February, we commenced the ascent of the high mountain behind us and were three hours in cutting our way through the tangled forest which covers it and all the mountains here. The rains are unusually late this year, but the trees had put on fresh leaves and rendered the scenery of a lively green appearance. Northwards from the heights we reached we saw an endless succession of high hills chiefly of the conical form. This district may be called the beginning of the really healthy region. We slept for a fortnight in the open air and seldom put on a blanket till to-night nor did we use quinine. Yet all returned in good health, and have remained so.

We are all of opinion that a steamer of light draught of water, capable of going twelve or fourteen knots an hour, would pass up the rapids without difficulty when the river is in full flood, in January or February. In my last despatch I ventured to apply to your Lordship for the *Ban*, a vessel belonging to H.M. Government, which was rejected by Capt. Bedingfeld. My acquiescence therein I have never ceased to regret but, having been furnished with a naval officer, I yielded to his judgment. The *Ban* would have taken all our luggage and all the Makololo up at one trip and saved me six months of hard labour in conveying our stores from one point to another piecemeal.

The vessel we have to trust to was tried by Mr Medlycott, R.N. without an ounce of cargo in her and a stiff breeze held her paddles, so that we were brought to a standstill, though we had 20 lbs more steam than there were allowed by the makers.

If we cut wood as pointed out by Mr Laird, we would require 18 men employed constantly at that alone or we would require all

our present hands (12) to be employed three and a half days for eighteen hours' steam. Even now, though we do not cut the wood half as small as Mr Laird wished, when at any distance from the coal we spend our time cutting wood. Such an unworkmanlike engine was never turned out of any shop and though I have always heard the yards of the Lairds of Birkenhead highly spoken of, I fervently hope that no other African expedition will ever be sent out trusting to their engineering workmanship. The body of the vessel, but for her extremely unmanageable shape (copied, I believe, from canoes, the makers of which were restricted by the width and by the size of the trees) would be all pretty well in calm water, but we have waves on the Zambesi that make us cling to the banks for shelter, and near the rapid, which force of steam alone can overcome, renders us in the MaRobert completely helpless.

We have still much work to do below the rapid but we shall wait with much anxiety for your Lordship's decision, as on it will depend a march to the Makololo country on foot, a mode of travelling which my former experience in Africa does not make me much in love with. I hope your Lordship will excuse the earnestness with which I write. We have ascertained nothing to invalidate the opinion which I have expressed that the high lands beyond are healthy and fit for the residence of Europeans. The only illness the party had been subject to, with one exception of one slight sunstroke, have been colds modified¹ by the Malaria to which we have been exposed on the water. Dr Kirk and I have enjoyed uninterrupted good health. The only cases of real fever we have seen have been among the Kroomen and, so far as my experience goes at present, Europeans are more likely to be safe and useful than Kroomen.

The Geologist reports having found 3 fine beds of coal, the first 7 feet thick, the second 13 ft. 6 in, the third 23 ft. They are all cliff sections and the last was fired a few years ago by lightning and burned a long time. I have already reported on its good quality, though obtained only from the surface.

Mr Thornton will run a shaft in some distance, in order to ascertain its quality. There are immense quantities of the finest iron ore in the same district.

I was not aware that Sugar was manufactured by the natives till lately, but I bought six pots of it at the rate of 2 yards of calico or a shilling for 20 lbs. This is only the beginning of the fine country and I naturally feel anxious that my companions should have an opportunity of verifying my statements respecting both productions and people.

¹ 'modified': a dubious reading in the original.

As for the inhabitants, namely the Portuguese, I almost despair of doing anything with them: my hopes are in our own countrymen and the natives of the central region, and possibly the difficulty of the rapids is rather favourable than otherwise, for if Englishmen get past in a powerful steamer, while Portuguese must pay exorbitantly for leave to pass by land, they may be more disposed to co-operate with us than they have been. At present their ideas centre on having a customs house at the mouth of the Kongone, that they may profit by whatever trade may spring up.

I enclose two sets of magnetical observations made by Mr C. Livingstone for the Royal Society. A spirit level has unfortunately been broken. General Sabine¹ will, I have no doubt, take charge of the observations and send out another spirit level with all convenient despatch to the care of Admiral Grey at the Cape.

I fear it may be considered irregular to send sketches with despatches, but I thought this the best way of conveying a clear idea of my meaning. The Photographs require varnishing and mounting for the Stereoscope. One showing a dead hippopotamus while also exhibiting the rock in the river, will be interesting to Professor Owen on account of a rupture in the perineum nearly healed when the animal was shot.

Another photograph exhibits the channel among the rocks. The extreme heat of the climate presents many difficulties to the operator, but should it be found that they can be transmitted uninjured and may be rendered to the science of Ethnology etc.²

I beg leave to draw your Lordship's attention to the drawing of the Zambesi above Tette by Dr Kirk, Enclosure No. 1, as presenting, without the accuracy of a regular survey, a very fair idea of the river in that part of its course. A tracing of the Zambesi from Senna to Tette accompanies the sketches of Mr Baines. It was made when the river was at its lowest and is of the broadest part where the sand-banks were most sheer. To my eyes the water, though often extremely shallow, made more figure than it had done to the eyes of the artist. Mr Baines' view of it is therefore probably the most correct and it may be considered as the river at its very lowest ebb. I came up in the same month (November), when the

¹ General Sir Edward Sabine (1788-1883) an artillery officer, astronomer to the Ross and Parry expeditions to the Arctic, an assistant in the magnetic survey of the British Isles (1834-36) who repeated the magnetic survey in 1861. He was a prominent member of the Royal Society and the British Association, through which bodies Livingstone doubtless met him.

² This sentence goes lamely: ? 'and service may be rendered'.

Launch was drawing 2' 6" and [I] was obliged to drag her by main force through 4 places of about 50 ft containing from 18 in. to 2 ft water.

I have much pleasure in adding that all my companions cheerfully perform various other duties than those strictly belonging to the department which they have especially in charge the above tracings by the Botanist and Artist.

I am not aware of the slightest [dis] harmony¹ among us.

I have the honour to be

My Lord

Your Lordship's Most Obedient Servant

(signed) DAVID LIVINGSTONE

though² the coal in vast amount lies on the surface and close to the water's edge, they cannot enter into competition with the free skilled labour of England. As long as their present system lasts, Newcastle coals may be placed at the port³ of the Kongone cheaper than those of the Revulene.

Leaving the coal field on the 21st Decr, 1858, we reached Senna in three days and then proceeded up the Shiré. We have always been on amicable terms with the people lately at war with the Portuguese and met therefore with no opposition. We found the river admirably adapted for steam navigation. It is deep and contains none of the sand banks which render the course in sailing on the Zambesi generally tortuous. Presuming that it might be agreeable to your Lordship to receive the remarks of another observer, I have requested Dr Kirk to furnish a report of the trip and will only add that, while the inhabitants shewed strong suspicions of our being man-stealers, it did not prevent them from indulging their passion for barter. They had plenty of cotton for their own use and seemed to be agricultural in their habits. In the presents we gave we tried to avoid imparting the idea that we paid for leave to pass. The diffusion of this idea round the Portuguese settlements has been a great barrier to the spread of their commerce. The information we received leads us to conclude that the Shiré actually does flow from Lake Nyanja, but, seeing the suspicions the first visit of Europeans had awakened, we saw that it would be hazardous to leave the vessel before we had secured the confidence

¹ By an unfortunate slip Livingstone or his copyist made a slip that entirely inverts his meaning.

² A leaf, or leaves, seems to be missing here from the beginning of what is manifestly a dispatch to Lord Malmesbury.

³ mouth, *first reading deleted*.

of the natives. This we hope to effect in the course of another visit.

Our further progress in the vessel was stopped by the cataract Mamvera. Three days beyond this the river is reported to be smooth and navigated by Arabs¹ in canoes.

We wish to be allowed to name the falls after Sir Roderick Murchison and a high mountain, whose native name is Manguru, after Lord Clarendon, in kind remembrance of the interest he took in the Expedition when in office. The advantage of having an English name as well as the native one is to perpetuate the nationality of the discovery and the point when the native name has changed.

We returned to Tette on the 2nd curr[en]t. The Zambesi being now about twelve feet above low water mark in November, it was difficult to recognize it as the same river. It is truly what Capt'n Gordon called it, 'more like an inland sea than a river' and exhibits none of those sand banks which, in trying to depict it at its lowest ebb, we have marked on the tracings sent home.

On the day after our return Messrs Livingstone and Baines returned from Kebrabasa. Their reports coincide exactly with what I stated in No. 12, as to the effects of a rise of the river on the rapid. It smoothes so as to obliterate formidable cataracts but a vessel of good steam power is necessary to stem the current in the middle and resist the suction of the eddies. On hearing that the rapid was so much changed that, but for the mountains which had been sketched, the situation of the cataracts would not have been known, I felt strongly inclined to attempt hauling the vessel up, but she can carry no cargo and, besides the risk of breaking up in the attempt, we should very soon be destitute of supplies if we had succeeded.

The Makololo, who may now almost be considered part of the Expedition, on learning our intentions to remain till we knew if H.M. Government would send a vessel capable of taking us all² the country in November or December next, came forward and proposed that I should give them Mr Charles Livingstone to lead a party of them back to their own country. This seemed so reasonable it was at once acceded to, but, while Mr L. was preparing for the journey, an afterthought changed their plan; for, recollecting that their chief had ordered them to return with me, they feared that having left me here might be construed into disobedience. I mention this to shew that in all their conduct since they have been associated with me, they have been actuated by intelligent motives.

¹ *Marginal addition:* from Zanzibar.

² A word missing: ? 'into'.

I regret that I did not feel at liberty to lead them back myself till I had received your Lordship's decision about the vessel.

I may be permitted to mention, for your Lordship's private information, that Major Secard, the commandant of Tette, feels somewhat aggrieved because the order from the Government of Portugal to support the Makalolo at the public expense of the Province of Mosambique, a copy of which was given me by Count de Lavradio about April 1857, was not sent out till a year afterwards; indeed I was the bearer of it myself. When the Major shewed the order to the Governor of Mosambique, he only made some casual remark and nothing was done. The Major supported four headmen: the rest gained subsistence in various ways for themselves. The Commandant has twice expressed a wish that your Lordship should be informed about this affair, in the hope that the Count de Lavradio may hear of it. But there is a native game law which claims for the owner of the soil the half of the elephant which falls on the ground. A number of my men have supported themselves by elephant hunting and several times they have killed the animals on the Portuguese crown lands. The native game law has been put into operation against them and they have been mulcted of a tusk each time by the Government of Tette; so, instead of being supported, they have aided the Government, and, having put your Lordship in possession of the facts, it may be best to allow the whole affair to pass without further notice.

This is the most unhealthy season of the year. Fever now prevails and is very fatal near the coast. Mr C. Livingstone, Mr Baines and Mr Thornton have had touches of the complaint, but all move about again. Dr Kirk and I have never had anything but good health since we came to Africa. When the unhealthy time is past, we propose working in the Shiré and Manica.

I am, etc.

DAVID LIVINGSTONE

A true copy
D.L.

Enclosure 1 by Dr Kirk to No. 13¹

TETTE, 14 Feby, 1859

SIR,

Having had the honour to accompany you on the expedition up the Shiré, I beg to hand you the following report, according to request.

¹ This report is copied into his record by Livingstone himself.

*Kroomen of the MaRobert cutting down a
palm tree for fuel, 25 July, 1858*



We entered the river on the 29 Dec, 1858, and came to anchorage in the afternoon opposite the North Western extremity of the Mountain Morambala, Lat. $27^{\circ} 24' S$. So far the river is confined between banks from four to six feet high covered with long grass. It has a two fathom channel free of sand banks and a current of $2\frac{1}{2}$ knots.

At the juncture of the Shiré and Zambesi, a little above Shamoara hill, the contrast between the waters of the two rivers is very marked, that of the Shiré being comparatively clear and bringing down an immense amount of Pistia or other aquatic plants, while the Zambesi, now in flood, is muddy but free of these plants.

The river Shiré flows at first nearly parallel with the Zambesi until, in passing the southern end of Morambala, it takes a course to North of the foot of the Western slope. On the 30 Decr 1858 we ascended Morambala by a rocky ravine in the North West angle. The slope for the first 3,000 feet was very steep: from most points the summit is inaccessible. We then reached a plateau covered with hills, the intervening valley[s] being from 300 to 600 feet in depth. Having crossed several of these we reached a village (altitude 3,594 ft) where we remained till the following morning.

This elevated region is extensively cultivated. The people are hospitable and unsuspicious, alike independent of the Portuguese and of the people of Mariano with whom the latter have been at war.

The vegetation differs from that of the plains. The damp valleys abound in ferns; the orders Balsamineae and Proteaceae, neither of which have been observed on the plains, are both represented. The whole district is well watered by small streams arising in springs often slightly chalybeate.

The highest peak ascended was found by the Barometer to be 3,814 ft. We could see another not far off at least 300 ft more. We may thus assume the general summit level of Morambala as nearly 4,000 ft above Shiré.

Nowhere on the Zambesi have I seen so much cultivation. Maize, yams, sweet potatoes, peas of various sorts, cotton and sugar-cane, tobacco and ginger are grown in the gardens. Lemons are abundant in the forests.

From different peaks we had a general view of the surrounding country. On the west the river Shiré is at the foot, a wide plain extending beyond as far as the hilly district North of Senna. To the North a series of jagged peaks seem to continue Morambala. The most remarkable of these is named Makanga. The valley of the Shiré lies between these two ranges of hills. The river crosses

diagonally taking a very serpentine course. On our return we found a sulphureous spring near the foot: the temperature at the source 174° Fahr.

We started on the first January 1859 and by the fourth had completely crossed the valley and reached the Northern angle of the Western mountains. The banks are not above four feet. The plain is formed into islands by branches of the river. There are also lagoons in which the people find the water lily root which they roast and eat.

Although this valley is well peopled, the amount under cultivation is small. With any encouragement the whole might yield rice, cotton and sugar-cane. By the banks we observed tobacco, Indian Hemp, ochro¹ and pumpkins seemingly uncared for.

The Shiré valley and adjacent country is inhabited by the Manganja tribe, governed by local chiefs. They are quite independent, having never been subdued by the Portuguese and are considered so warlike that no trader ventures among them. The men go around with poisoned arrows. The women wear an ornament consisting of an ivory ring one inch and a half in diameter and one in depth, either tubular or cut in the form of a cup. This is inserted in a slit through the upper lip. Their language is a modification of that of Senna and Tette, but is quite unintelligible to natives of these towns.

The valley bends to the North West, having to the South West the Northern boundary of the Hill district and an extensive mountain mass to the N.E. in the distance. One of the most southerly of these² ends to the South in a large lofty mountain and named Manguru by the natives. It is the most prominent object in the horizon. Some of the other hills are bold and rugged. The part of the valley here seems marshy and uninhabited, but the rivers abound in hippopotami and the plains are covered with herds of elephants with very fine tusks. While in the midst of this desolate tract our supply of wood was ended and we should not have been able to proceed had the happy idea of burning the bones of elephants not occurred to Dr Livingstone, by means of which we pushed on to a well-wooded district at the foot of the hills. Both valley and hill slopes were cultivated. The banks were higher than in the lower parts.

On the 9th January 1859 our onward progress was stopped by a cataract called Mamvera, having a fall of 12 ft in 156 yards among large rocks. This is situated where the Shiré comes out from the

¹ So in the original, obscurely.

² *Marginal note:* See Dr Livingstone's dispatch.

hills. The natives spoke of the river, while crossing the mountain range, being a series of such cataracts with one large fall. Beyond the hills it is again free from obstructions and navigated by Arab traders in canoes up to Lake Nyanja. The overland journey was spoken of as 5 days.

Being the first Europeans in this region we were looked upon with suspicion and closely watched night and day. Yet our wooding party on shore was never molested. While this feeling of suspicion lasted it would have been imprudent to undertake an overland journey. We remained there three days in hopes of a clear sky for observations, which also gave us an opportunity of shewing the people that we had no hostile intentions, and we may hope to find the path open to future exploration.

While we remained the people came off in canoes for trade. We purchased abundance of provision at a cheap rate. They brought cotton of two qualities, both fine. It grows there with little care and, even when the plant is burned down, springs up again the year following. Sugar-cane grows well and probably the natives extract sugar from it, as they do among the people to the West.

We started on our return Jan'y 12, entering the Zambesi on the morning of the 14th.¹

We have thus shewn a navigable river upwards of 100 miles in length, a people engaged extensively in agriculture, with a soil capable of growing not only cereals but also cotton and sugar-cane of excellent quality and in almost unlimited amount.

This rich valley may be divided into three portions, the first near the Zambesi about 20 miles in length, cultivable; the second only 15, marshy but abounding in game: the third, 25 miles, this is probably the both² richest and healthiest of the three. The general width may be estimated at 20 miles.

The situation of Morambala at the junction with the Zambesi would be of the greatest importance to Europeans as a healthy station midway between the growing district and the sea.

While on the river none of our party complained of the least sickness, although we were much exposed and this is the unhealthy season.

I have the honour to be etc.

JOHN KIRK, M.D.
Zambesi Expedition³

¹ Here Livingstone adds: 'see continuation on side of page'. His transcript is continued up the margins of the first six pages of the report.

² So in the original.

³ Here follow details of clothing issued to Kroomen, loans to members of the European staff and other financial transactions that are not reproduced here.

*Journal A.2**Slave Trade.*

TETTE, 4 March, 1859

No 1.

The Right Honourable

The Earl of Malmesbury.

MY LORD

About the beginning of October last an intelligent native pilot informed me that a cargo of slaves had been despatched a few days before from Massangane or Sangane, a grazo or farm situated in the mouth of the Maindo, a river lying some fifteen or twenty miles South of the entrance to Quilimane. The person who had shipped them was a Senhor Cruz,¹ a resident in Quilimane and owner of the farm.

The proceeding had caused considerable uneasiness in the class to which the pilot belonged, namely the 'Colonos', serfs, for Sr Cruz had forced his sister-in-law to part with her domestic slaves in payment of a debt, and exported them. As household slaves and serfs were believed to enjoy the privilege of rarely being sold except for crimes, the above shipment had raised an alarm; but it was hoped that through the influence of Major Secard the example would not be followed up the Zambesi.

Information was also obtained from the Portuguese themselves that Cruz had made a contract with certain parties in Bourbon to furnish several hundred slaves to be exported as free immigrants at so much per head, but, being aware of the prevailing disposition of the parties to slander each other, I hesitated to report, in a Despatch to H.M. Government, the ensuing revival of the slave hunting² in the countries N.W. of Quilimane, in order to the fulfilment of the contract, until I could feel positive that the representation might confidently be relied on.

It is now notorious that Sr Cruz ships cargoes of slaves regularly from the Maindo in French vessels, and the merchants here complain that he is so plentifully supplied with money as to be able to purchase all the goods that come to Quilimane and he will not part with them for aught but slaves, or food used in exporting them. They have no chance of selling their wares except at a ruinously low

¹ Livingstone writes the name with careful precision, each letter by itself.

² trade, *first reading cancelled.*

price and will probably be forced to bring slaves to Cruz instead of lawful commerce.

Sr Cruz has an active agent for collecting slaves at Shupanga named Sr Francisco, and a Portuguese woman left this yesterday with a cargo of slaves in irons for that depot. A feint was made of catching her after she had left. But the Governor of Quilimane is conveniently ill at present, and all understand the meaning of his connivance in Sr Cruz's dealing too well to hinder them. It is boasted that, though English men of war were in the Mosambique channel, they dare not interfere with these emigrants in irons. And when people in authority are asked if their home Government did not disapprove of this new slave trade, they reply of course it did, but no one knows or cares about what is done out here by the Viscount de Sá da Bandeira.

It is vexatious to witness the infatuation with which the Portuguese again commence the trade which ruined their power and commerce in this region. It may truly be said that they export their labour for a trifle and neglect fortunes lying at their feet. I assure your Lordship that I could rise from this letter and [gather]¹ many cart loads of Indigo growing as a weed in the streets of Tette. It will all be allowed to rot or be burned off as a nuisance. The plant has been found by Dr Kirk to yield excellent Indigo. Viewing the indifference of the few Portuguese, whose presence at widely separated points in this vast country prevents other nations from entering it, to Indigo, to Buaze, which also grows wild, as well as to the cotton, sugar cane, coal, etc. etc., and their eagerness to engage in slave-trading as soon as our squadron allows it, I cannot help calling to mind how thousands of our own countrymen are anxious to develop lawful commerce, were their presence here admitted. While enriching themselves, they would crown with success the efforts of England to abolish the slave trade—this French scheme threatening to render all our past efforts fruitless. The conviction is forced upon the mind that a small colony of our own nation on the healthy highlands, beyond the Portuguese influence and pretensions, would eventually be of immense value both to Africa and to England. There are hundreds of square miles of all but unoccupied though fertile territory. Large districts have been depopulated by war and we have now the near prospect of the scourge being again set in motion by the demand for slaves at Massangane. One of these districts situated near the Kafue could be purchased at a cheap rate: thousands of natives would flock to it as they have done to Natal: they have a general longing for the

¹ Some such word seems to have been omitted here.

presence of a superior power, and the English, so far from being considered intruders, would increase the high moral influence which the French scheme is damaging. In my last Despatch I enclosed a report from Dr Kirk on purpose to give your Lordship the views of another observer on a small portion of the country North of this, which I have maintained to be capable of raising cotton superior to the American. Dr Welweitch's report of Angola is to the same effect. I therefore submit the idea of an English colony being capable of ultimately rendering us independent of America with the greatest confidence to your Lordship's judgment.

I am etc.

A true copy
D.L.

DAVID LIVINGSTONE

Journal A.I

Copy.

RIVER ROVUMA,
25th March, 1859

D. J. May, Master, R.N.

SIR,

In order to remove the misapprehension under which you appear to labour in publicly stating that 'you never would have come out to be under any one but myself', I beg leave to direct your attention to that part of the Instructions of H.M. Government which relates to the Constitution of the Zambesi Expedition and any changes that might be required:

'In the event of Dr Livingstone being prostrated by sickness, or by accident rendered incapable of conducting the Expedition, the charge will devolve on the second in command. Should he too fail it will devolve on Dr Kirk, and then on Mr Charles Livingstone; but immediate information of such an event is, if possible, to be transmitted to England for further instructions.'

The Second in Command did fail and Dr Kirk and Mr Charles Livingstone became second and third in command in accordance with the foregoing instructions.

After careful perusal of the wording of your appointment to the charge of the Pioneer and of the instructions for your guidance up to the period of your placing the vessel at the disposal of the

Expedition, I cannot find a hint even, to warrant the idea that the previous arrangements of the Foreign Office have been cancelled. On the contrary you are distinctly told that the Pioneer is not a distinct command. She is not to be considered as subject to the naval rules of seniority, nor in any other light than as helping the Foreign Office and subject only to the orders and instructions thence derived.

I am, Sir, your most obedient servant

DAVID LIVINGSTONE

H.M. Consul

Commanding Zambesi Expedition

Enclosure No. 1

Report on the African Fever.

To Sir James Clark¹

Remarks on the African Fever in the Lower Zambesi

by David Livingstone

and John Kirk, M.D.

While employed in trying to open up Africa to the influences of civilization and commerce, the first thing that naturally attracted our attentions as Medical Men was the fever which we think has proved one of the great barriers to the advance of Christian Nations into the interior of the Continent.

We have enjoyed facilities for observing the disease during the last twelve months not only among those of the Expedition but likewise among Portuguese and natives and, our Experience having been very different from that of others, we deem it desirable to lay the results before our Medical brethren, as a small contribution to the Knowledge of the destructive disease.

Our observations are far from being so full as might be desired but, when travelling in this country where the grass towers overhead and almost hides the narrow paths, it is of the utmost importance to be put on the right one at the beginning. Our remarks may thus prove serviceable in preventing others from making a wrong commencement.

About a month was spent by the Expedition in endeavouring to find an opening from the sea to the main river through the Delta. This part may be described as abounding in Mangrove swamps and damp plains covered with gigantic grasses. The Mangrove

¹ Sir James Clark (1788-1870) Court Physician to Queen Victoria, most generally remembered to-day for his part in the unhappy affair of Lady Flora Hastings.

Swamps emitted a most offensive smell and gave us the impression that they were most fitly named the hot-beds of fever.

Above the Delta the river is remarkable for the quantity of fine sand which it carries in its waters and deposits everywhere in banks which during about half the year are exposed to the sun. There is comparatively little mud and in this respect, as well as in the greater height of its banks, which are also of sand, it differs greatly from the rivers of the West Coast.

The Mountain of Mwamballa,¹ 4,000 feet high, appears to the East of Senna, and a range of hills on the north bank of the river stretches from that village up to Lupata, above which the country is hilly and the banks of the river rocky.

Warned by the fate of the Great Upper Niger Expedition, it was resolved that no unnecessary delay should take place in the Delta and that the prophylactic aid of Quinine should be tried.

The season chosen for entering the river was the winter (from May to August), the most healthy time for Europeans, though not the most favourable for navigation, and during the stay of the Expedition among the Mangroves not a single case of fever occurred among the officers and crew of the Pearl, or H.M.S. Hermes who accompanied it.

Quinine was taken regularly by all the Europeans with a single exception, to the amount of two grains in Sherry every day. And we were quite disposed to attribute our immunity to the prophylactic so much praised for its efficacy on the Niger, although the former experience of one of our members suggested its total inefficiency to ward off an attack. Three of our number became affected with incipient Cinchonism: in their cases the dose was lessened. We seemed always to be on the verge of Cinchonism, as an additional dose could induce deafness and ringing in the ears to an intense degree in the course of a few hours.

The following is the number of those who escaped without a single case of sickness, although exposed to hard work in the sun and frequently sleeping in the boats in the lower part of the Delta: 10 officers, 37 seamen, 12 Kroomen, 2 Boys from Sierra Leone.

Three of our members were left in charge of goods on an island about 20 miles above the Mangrove swamps but probably not beyond their influence. The soil was of stratified sand with an alluvial layer on the surface covered with grasses. The neighbouring country presented the same aspect as the island and was similarly constituted.

Previous to this there had been hard work and constant excite-

¹ Morambala.

ment. Those left on the island, although less exposed, had a comparatively inactive life. They had not been very long alone when two of their number became sick. Mr B[aines] was seized with slight rigors, severe headache, delirium with contracted pupils. These symptoms were sudden and followed an imprudent course of exposure to the sun. Although removed in a few hours, they speedily returned after renewed exposure, but this time more severe, the full bounding pulse, dry tongue and hot skin showing the intensity of the fever. Vomiting, which now commenced, formed the most troublesome symptom and became an obstacle to all treatment, as remedies were not retained beyond a few seconds. Although the other symptoms abated after twelve hours, vomiting continued, and soon the disease returned in a more serious form, running into muttering deliriums, with involuntary wetting of the bed clothes. When on the verge of coma, remedies began to be retained, and the action of a large dose of Calomel with Jalap Resin relieved the Cerebral disorder and, by reducing the instability of the stomach, allowed Quinine to be given. Convalescence was very rapid: in a few days all traces of the disease had gone. A fortnight afterwards Mr B[aines] was again seized with the same symptoms, vomiting again being the great obstacle and, from its continuance after the others had been subdued, rendering the convalescence slow. Loss of memory and muscular weakness continued for some time after this attack.

While Mr B[aines] was sick, Mr C. L[ivingstone] had fever also, but in a very different form, and we did not then recognise the two as being the same disease. In him the symptoms were those of a cold such as we see in Europe. At first frontal headache, pain in the back and limbs, lassitude and indifference to what went on around. This state was followed by one in which he lay without speaking; headache had gone, the puke was small and thready, the skin at one time burning hot, at others coated with a clammy perspiration. In this case slight diarrhoea had continued from the beginning. Quinine was tolerated but although the constitutional¹ action was evident, yet the fever did not abate until a mercurial purgative had been given.

These were the first cases of fever among us nor did we see more for some time afterwards.

In the month of August all the goods had been conveyed ashore at Shupanga. Two officers were left there in charge while the steam-vessel proceeded to Tette, taking with her those who had suffered on the island.

At this time the Portuguese were engaged in war against a party

¹ There is some doubt about the end of this word in the original.

of rebels and, the army being destitute of every medical appliance of any description, an opportunity was offered of observing the fever and other diseases in their worst forms among those exposed without proper shelter or food and in subjects frequently worn out by constitutional disease. The commanding officer was the first case we were requested to see. He had obstinately refused all remedies but, being then in a state of coma and unable longer to refuse, an active purge was given, followed by 30 gr. dose of Quinine, which soon restored health. In him there had been no other symptoms beyond those of severe constipation,¹ fever running on rapidly to coma. This is the type most frequent in the lower parts of the Delta, especially at Quilimane. In the vicinity of Tette it is seldom fatal.

The limited experience we have had seems to indicate that the type, once established, has a constant tendency to recur. Should further observation confirm this, it would become of importance to send all Europeans, on their arrival, to the higher levels, so that, should they be subject to fever, they might have it in its milder form first and carry that with them to the more unhealthy localities.

While the party at Shupanga enjoyed good health, notwithstanding the partial discontinuance of Quinine, several cases appeared on board the steam vessel. We may mention that the accomodation on board was both very scanty and very uncomfortable, water running into the cabin while the vessel was under steam, so as to keep the beds constantly wet beneath. Fortunately the weather was dry, or the rain would have poured in from above, as we subsequently experienced.

Mr R[ae], the Engineer, had taken Quinine with unvarying regularity, had an excellent appetite and seemed to enjoy the climate. In working the Engine he was obliged to see the fire lighted at 2½ P.M. in order to have steam by 7 A.M. An African had shifted his bed through the night, so as to prevent Mr R[ae] getting his clothes, and he proceeded to light the fire in his shirt. The consequence was pains all over the body and limbs, the bones being especially sore, the face flushed, eyes suffused, headache and quick pulse. The bowels had been regular and the tongue clean. A pill composed of Resin of Jalap, Calomel, Rhubarb and Quinine, which had formerly been found efficient for fever, was given, more as a precautionary measure than from a belief that this was a case of the complaint. It seemed more a common cold than the African fever. As soon as the remedy had operated the symptoms abated. Quinine was then given and one dose of ten grains produced severe

¹ Somewhat doubtful reading.

Cinchonism, from which when he recovered he was quite well without loss of strength.

Towards the end of the rainy season the members of the Expedition were divided. Those who had previously suffered from fever remained at Tette, while we went down the Zambesi to the sea and explored the River Shiré, both very unhealthy districts. While one of us was exposed to sun and rain, navigating the vessel and, ashore, superintending the wooding, the other was engaged botanizing among grass jungles and mangrove swamps. Yet both escaped entirely. The use of Quinine had been completely abandoned and we are inclined to attribute our good health to the regular and active exercise which both these occupations imply. In this respect our experience corresponds with that of the Portuguese residents, who assert that, while actively employed, they enjoy good health.

While we explored the high lands around Lake Shirwa the steam vessel was left on the R. Shiré under the care of Quartermaster Walker. We were absent 24 days. Walker was seized with fever the day we left: it commenced suddenly, though he had taken Quinine regularly. On our return we found that he had been delirious most of the time and the fever had shewn no sign of abating, but the action of purgatives, followed by Quinine, soon restored health and in subsequent attacks at the sea coast among the Mangroves, no difficulty was experienced in cutting short the attacks at the beginning.

Our own experience in the high lands between the Shiré and Lake Shirwa during 24 days, when we were exposed in the early hours to the dew from the long grass, continuing the march without interruption through the remainder of the day over rough country under the tropical sun, and then sleeping in the open air, and yet enjoying perfect health, as did the natives who were with us.

I have clearly [shewn] that there exists, within a short distance of the coast, a healthy region well suited for the residence of Europeans. This region is elevated above the sea from 3 to 4,000 feet and shut off from the coast lands by the range of high mountains to the East of Lake Shirwa. It is of easy access by the Shiré which flows at the foot of the hills and is navigable the whole distance. To the North the Southern extremity of a chain of Lakes which extend far into the interior of the Continent reach within 30 miles of the R. Shiré.

This elevated region may be looked on as the entrance by the means of these inland seas to a great part of Central Africa, cut off hitherto from communication with European nations by the unhealthy lands which bound the coast.

The result of our experience has been to discontinue the daily use of Quinine. It had been persevered in long after the conviction of the members had been against its prophylactic power. It is our conviction that we owe our escape from the disease far more to the good diet provided for us by H.M. Government than to the use of Quinine.

We have been as fully exposed to the malarious influence as any party is likely to be. The vessel in which we have had to navigate is one which takes in so much water that our beds are constantly damp and often rotten beneath with a quantity of water in the bilge of the ship. Yet we have found the fever quite amenable to treatment when taken early and attention paid to any local congestions which may manifest themselves.

Let it not be thought that we undervalue Quinine: to it we trust for the removal of the disease when given after purgatives. In all forms of the fever we have found it of the greatest value and three doses have always proved sufficient to induce the constitutional action even in those who have not been taking it previously.

We have found the Fever assuming a formidable type only when permitted to go on unchecked for some time in those exposed to great fatigue, damp and poor diet, when the irritable state of the stomach prevented the administration of Quinine.

In regard to the complications most frequently seen among ourselves, vomiting had been the most troublesome, and blistering over the stomach has seemed the best means of stopping it.

We have fortunately escaped without more serious inflammatory lesions of the internal organs, but among the Portuguese two cases have been observed with pneumonia; both cases proved fatal. The tartarate of Antimony seemed to have no effect, while stimulants were evidently powerless when sinking had commenced. Enlargements of the spleen, when of recent date, have yielded quickly to the use of Sulphate of Iron and Quinine.

The ship's company, consisting of Krumen, have shewn no greater immunity than the Europeans. The experiment with Quinine was made with them, but its prophylactic action proved equally feeble as in our own case.

In future Expeditions of a similar nature we beg to suggest that the work of the contracting ship-builders be more scrupulously tested than it had been in our own case, where the defects, once observed, completely baffled all attempts at remedy.

Copy.

Zambesi. July 1859

Journal A.3

Copy.
No. 2.

SENNA, RIVER ZAMBESI
12 May, 1859

The Right Honourable
Lord Malmesbury

MY LORD,

In accordance with the intention expressed in Letter No. 1 of the present year, of revisiting the river Shiré as soon as the alarm created by our first visit had subsided, I have the pleasure of reporting to your Lordship that, having found the people this time all friendly, we left the vessel in charge of the Quarter master and Stoker, with a chief named Chibisa [Lat. $16^{\circ} 2'$ South: Long. $35'$ E]; and with Dr Kirk and thirteen Makololo advanced on foot till we had discovered a neighbouring inland Lake called Shirwa. It has no known outlet, but appears particularly interesting from a report of the natives on its banks that it is separated from Lake Nyimyesí (probably the Nyassa, Nyanja or Nmamesi of map-makers, which is believed to extend pretty well up to the Equator) by a tongue of land only five or six miles broad and, as we ascertained, the southern end of Shirwa is not more than thirty miles distant from a branch of the navigable Shiré.

The course pursued was chiefly North and along the banks of the Shiré. We were in a mountainous country and the observations of [the] aneroid Barometer registered by Dr Kirk shew that we only gained some hundreds of feet of elevation. The river, besides rushing over several cataracts, has generally a current as rapid as a mill-race. About Lat. $15^{\circ} 30'$ South it is about 30 yards wide and the channel, though deep, being but little depressed below the level of the banks, it gave the idea of water power without dams and sufficient to drive all the mills in England. Our route was much more tortuous than the river, because we were obliged to go from one headman's village to another and much delay was occasioned by formalities¹ necessary to convince every little great man that we were not a company of marauders. Chibisa was the only man who did not feel² it incumbent on him to collect all his people together before giving us an audience, but he possesses a firm belief in his own inherent dignity. He told us that his father had imparted an

¹ the delays: 1st reading, cancelled.

² think: 1st reading cancelled.

influence to him 'whereby all who heard him speak feared his words'. He spoke of it 'having entered by his head', as one would a fact in natural history and we found that he really did possess considerable influence in the country Northwards from which traditionally his family emigrated. The weight of his name, by means of a man whom he sent with us, was of essential benefit. Our progress was, however, slow, for after a fortnight's journey from the ship we were not more than forty miles distant in a straight line. We had come near a lofty mountain called Dzomba or Zomba¹ and, on crossing a spur of it on the South, we first got a distant view of Lake Shirwa at the foot of a range of high mountains in the East. We had traced the Shiré up to the Northern end of Zomba but were prevented by a marsh from following it further on that side. Coming round the Southern flank of the mountain on the 14th April, we saw the Lake and were then informed that the river we had left so near it had no connection with Lake Shirwa. We then proceeded Eastwards and on the 18th April reached its shores. A goodly sight it was to see, for it is surrounded by lofty mountains and its broad blue waters, with waves dashing on some parts of its shore, look like an arm of the sea. The natives know of no outlet. We saw a good many streams flowing into it, for the adjacent country is well watered. Several rivulets which we crossed unite and form the Palombe and Sombane, which flow into the Lake from the South West. The water of the Shirwa has a bitter² but is drinkable. Fish abound and so do alligators and hippopotami. When the Southern winds blow strongly the water is said to retire sufficiently from that side to enable people to catch fish in weirs planted there.

The lake is of a pear shape, only the narrow portion is prolonged some thirty³ miles south of the body⁴ where we stood. There is an inhabited mountain island near the beginning of the narrowing part. The broad portion may be from (25) twenty-five to thirty (30) miles wide. We ascended some way up the mountain Pirimiti and, looking away to the N.N.E. we had 26° of watery horizon with two mountain tops rising in the blue distance like little islands fifty or sixty miles away. The natives use large canoes for fear of storms on it, and reckon it four days' journey, paddling in a calm, to reach the end; but without strong wind they can do it in two days. Until it is surveyed it will not be over-estimated at sixty (60) or seventy (70) miles in length. This does not include the southern narrow portion of thirty miles.

¹ or Zomba : *marginal additions.*

² 'some thirty' repeated in the original.

³ ? 'taste' omitted in the original.

⁴ So in the original. ? 'Bay'.

The height of the Lake above Chibisa's island, where we left the ship, was 1,600 feet, or in round numbers 2,000 feet above the level¹ of the sea. Mount Zomba is over 6,000 feet high. In passing its Southern spur we were 3,400 feet above the ship, and the great mass of the mountain rose on our left apparently of greater altitude than Morambala which by ascending we found to be four thousand feet high. It is inhabited and we could see cultivated patches below. To a spectator in the far North it will appear as standing in the Lake. It is not actually on its shores, but it separates the valleys of the Shiré and Shirwa and, as the natives report the Shirwa to be separated from a much larger lake, Nyinyesi, by a strip of comparatively level land which would scarcely be taken into account by the Arab traders in their description, we see the general correctness, so far, of the information² collected by the Rev. Mr Eckhardt, of the Church Missionary³ on the East coast.

Nyinyesi is also known as the 'Great Nyanja' but this word, being applied to any collection of water and even of rivers, as the Shiré, Nyinyesi = the Shiré, seems preferable.

The whole region was well though not densely peopled with Manganja, who inhabit both banks of the river Shiré from Morambala up to Chibisa's place, but they occupy the Eastern bank only and the adjacent mountains beyond that point. The Western bank above Chibisa is peopled by Maravi. None of this tribe is to be met with near Shirwa, so it would appear to be improper to identify it with the Lake Maravi of the maps. Nor can we set it down as that concerning which I collected some information from Sr Candido of Tette, for it was described as forty-five days to the N.N. West of that village. The Portuguese do not even pretend to know Shirwa. It is necessary to state this because, after the first European had traversed the African continent, the Portuguese minister claimed the honour for two black men—*farantes pretos*, trading blacks—according to the history of Angola and *Pombeiros*—trading persons of colour according to the Portuguese archives, as examined by Bowditch to whom the minister refers,⁴ and these blacks, in the memory of a lady now living at Tette, came thither dressed and armed as the people of Londa, but proceeded no further. They thus failed by about 400 miles of what was claimed for them; and now, as Lake Shirwa is found to stretch some forty miles on each side of the latitude of Mosambique and they neither crossed nor

¹ 'above the level' repeated.

² Two MS pages repeat the text from 'reach it in four days' to 'so far, of the information'.

³ So in the original.

⁴ as examined . . . refers : *marginal continuation*.

came near it, the inference is obvious. We made frequent enquiries among the people if they had ever been visited by white men before and we were invariably answered in the negative. A black woolly-haired slave-trader once visited the part, but the discovery is not spoken of in reference to such, the Lake being surrounded by them—but it is claimed for Dr Kirk and myself as *Europeans* who accomplished it, entirely ignorant of any information that may or may not be locked up in Archives.

Our friends the Portuguese dare not enter the river Shiré. The Manganja are brave and repelled an expedition sent in former times before it had gone thirty miles. Traders are afraid to go, as some native ones have been plundered, but we have gone about one hundred and fifty miles without once coming into collision.

The Manganja cultivate the soil very extensively and more men than women were sometimes seen at this occupation. The soil is very rich. The grass, generally from six to eight feet high, overhangs the paths which, from being only about a foot wide, there is a perpetual pattering on the face in walking. A few yards distance often hides a companion completely and guides are always necessary, it being impossible to see, on entering a path, where it leads. Even the hills, though remarkably steep and stony, are very fertile. Gardens are common high up their sides and on their tops. They present a pleasant diversity of light and shade in the general dark green colour of the trees with which nearly all are covered. Cotton is cultivated largely and the further we went the crop appeared to be of the greater importance. The women alone were well clothed with the produce, the men being content with goat skins and a cloth made of bark of certain trees. Everyone spins and weaves cotton. Even chiefs may be seen with the spindle and bag which serves as a distaff. The process of manufacture is the most rude and tedious that can be conceived. The cotton goes through five processes with the fingers before it comes to the loom. Time is of no value.

Two varieties of the plant, one indigenous that yields cotton more like wool than that of other countries. It is strong and feels rough in the hand. The other variety, from imported seed, yielding a cotton that renders it unnecessary to furnish the people with American seed. A point in its culture worth noticing is the time of planting has been selected so that the plant[s] remain in the ground during winter, and five months or so after sowing come to maturity before the rains begin or insects come forth to damage the crops.

The Manganja have no domestic animals except the sheep, goats, fowls and dogs. Provisions are abundant and at a cheap rate. They have no ivory and few wild animals are seen, but they

assert that elephants and large game abound among the Maravi West of the Shiré. Their weapons are large bows and poisoned arrows with iron heads. Every one carries a knife and almost every village has a furnace for smelting iron black magnetic¹ ore. Spears are rarely seen, but are very well made of excellent iron. Firearms have not been introduced but a rude imitation of a pistol has been made by a people N.N.W. of them and it is used with powder only on occasions of mourning. They were not aware that it could propel a ball. It cannot be classed with arms but with the apparatus of the undertaker. They think that making a noise is the proper way of expressing grief.

The bodies of both sexes are tattooed with straight raised lines radiating from various points, and all file their front teeth with stones so as to leave them a semi-circular shape. The women perforate the upper lip close to the nose and enlarge the orifice till they can insert a ring of ivory or tin of from one and two inches in diameter. Some ladies of fashion have the upper lip so drawn out as to admit which with² the outer edge of the lip hangs below the chin, and the mouth and under lip appears through the upper. All were timid. Men whom we met unexpectedly in the long grass threw down their burdens and ran away. It is probable that our dress and colour are as uncouth to them as their nakedness and lip rings are to us. When we entered a village the women rushed into their huts and shut the doors in terror, and even the fowls would take to wing and leave their chickens in dismay.

When at Lake Shirwa the people pointed out a pass in the mountain range Milanje through which a tribe named Amguru come to attack them with guns. We came close to a large party of Bajana or Ajana, slave traders who were in the habit of carrying their captives to Quilimane. They persuaded the Manganja to mislead us, so that we did not see them. Some of the women told the Makololo that the Bajana said the English would stop their trade and no more foreign cloth come into the country. The chiefs tried to justify their cooperation in the traffic by asserting that none but criminals were sold. No impudence was shewn to us except by another party of Bajana slave traders and their deportment was instantly changed on learning that we were not Portuguese but English.

In returning to the ship we went down the Shirwa, leaving the³ Shiré valley on the West. The narrow part of the Lake and the

¹ black magnetic *added in margin.*

² So in the original.

³ Shirwa, instead of, *1st reading.*

lofty mountains of the Milanje range were on our left. This has a comparatively flat top and is inhabited, but another mountain was more to the North, of equal if not greater altitude than Zomba, is so abrupt and jagged as to appear quite inaccessible. No other mountain looked sterile. All are covered with grass and trees and are very beautiful. The general vegetation of this elevated region in which we were travelling was like that of Londa in the middle of the continent¹ and, like it too, there are many bogs and flowing streams. The people cultivate the Manioc root largely, like the Balonda, but we could not ascertain that their religious sentiments were identical. We saw many old people and, the country being so high, we believe it to be healthy. It was considerably cooler than the part of the Shiré to which we descended. We slept twenty nights in the open air and on the ground, and got our clothes wet with the dew every morning from the high grass overhanging our paths, yet returned from our march of 22 days in good health to the ship.

We found that Quarter master Walker had been suffering from fever ever since we left the ship but recovered soon after the proper remedies were applied. I take this opportunity to state that Messrs Livingstone, Thornton, Rae and Baines have suffered frequently from this complaint during the last few months. The attacks however were so modified by our being well provided for that we did not recognise the disease as identical with that which, when destitute of every comfort, I suffered so much from myself. The majority of the attacks have resembled greatly common colds. Their frequent return with the very same symptoms in the same individual, and these more intense in the unhealthy season, led us at last to conclude that we had been dealing with fever. My own ideas and those of Dr Kirk are completely modified as to what fever is by our late experience. We believed that we had entirely escaped the African fever, but now consider that all common colds have been modifications of the disease. What is of more importance, we can cure it readily, and, when taken early, in a very short time. Dr Kirk and I have enjoyed excellent health ever since we came to the country, though we have been more exposed to the malaria than the others. In navigating the vessel I have been constantly in the sun without injury.

In coming out of the valley of the Shirwa we crossed a plateau between it and the Shiré of between 3,000 and 4,000 ft elevation. There we got a glimpse of the end of the lake in the South, and an opening in the mountains near the southern end of Milanje seemed

¹ country, 1st reading cancelled.

to disclose a part of the Shiré marsh where we found so many elephants. We descended, as before mentioned, and then sailed down to Lat. $16^{\circ} 3' S.$ to a branch of the Shiré called the Ruo. This we ascended in the steamer seven or eight miles to a cataract called Pakampinga and found that by this route we were not much more than thirty miles distant from Lake Shirwa. The chief at the cataract, called Mororo, seemed quite friendly and perhaps it may be possible to carry a whaler over the intervening land between the Ruo and Shirwa and thence to explore Nyinyesi. Some time must elapse before a vessel capable of stemming the Keprabasa¹ rapids can arrive, and we hope that our service in the² discovery of Lake Shirwa and the proposed employment of the next few months before gaining the sphere of our more permanent operations, may meet with your Lordship's approbation.

I have the honour etc.

DAVID LIVINGSTONE

Consul

Commanding Zambesi Expedition

Copied 19th May at Kongone Harbour

D.L.³

P.S. We have received no news from England during the last twelve months. We made enquiry at Lake Shirwa whether Captain Burton's party had reached Lake Nyinyesi, but could learn nothing about him. If we should find that he has already explored that Lake it may modify our plans. Supposing him to have succeeded, we may claim the discovery of a Lake and a short route to his.⁴

We proceed from this to the mouth of the Kongone in hopes of meeting a man of war with salt⁵ provisions on the 24th May and thence to Tette to embark Mr C. Livingstone to make magnetic observations for Royal Society. He was left at Tette with orders to explore the gold producing country to the S.W. of that village but irruptions of the Caffres in that direction prevented his accomplishing that service. The geologist has been working at the coal near Tette.

D.L.⁶

¹ So in the original.

² in exploring, *1st reading*.

³ *Marginal note.*

⁴ So in the original: ? his discovery of Lake Nyinyesi.

⁵ fresh, *1st reading cancelled*.

⁶ Here follow altitude observations made by Livingstone on 30th June, 1858.

31st May, 1859. Sheet marked ' *Separate* ' in Despatch No. 2.

MY LORD,

We have been down to the Kongone mouth of this river in the hope of meeting the man of war with salt provisions for our crew, but a probable detention of our letters to the Admiral has prevented his visit.

Our movements seem to have awakened the jealousy of the Portuguese and they seem afraid that England may set up a claim to the countries first explored by us. A settlement is about to be made at the confluence of the river Shiré, the first they have on the North bank of the Zambesi, by way of laying claim to all the Lake territory with which we are engaged. Instead of collecting the various articles which we point out as of undoubted commercial value, all their energies are expended on a paltry trade in ivory and schemes for securing the profits of a grand river trade which as yet has no existence and which they will not stir themselves to develop. A custom house is to be erected at the Luabo and Kongone mouths of the Zambesi, whose navigability we alone discovered. We have explained the uses of the cotton gin and offered to lend them two or three machines for experiment, but they seem to imagine that we have some other objects in view than the promotion of trade. They are exactly like the negroes and fancy that our motives are identical with their own. Only two or three have planted cotton. The people of the Shiré, on the contrary, brought several small bags of cotton for sale on our second visit, though no time had elapsed to allow of planting since we informed them of the existence of a market. The Cotton trade is quite ready for development among them by agents such as Sierra Leone supplies to the Niger. The inhabitants are quite independent of the Portuguese, but unless a late Ordinance of the Govern(ment) of Portugal allows foreigners to settle in the country, neither¹ cotton nor sugar will be collected.

We propose sending seeds and living plants of the Buaze to India. It becomes a bush and even a tree, yielding a crop annually by being pollarded. The crop is certain and it grows on hills and rocky parts incapable of other cultivation. The seeds yield an oil similar in properties to Linseed oil. The fibre is worth between £50 and £60 per ton. The Portuguese might collect it in large quantity, for it grows wild, but their only trade is Elephant tusks to the annual amount of 72,000 lbs. We have a box of Buaze ready for transmission to England. A small portion taken home in 1856 was pronounced by the Manufacturers, Messrs Pye Brothers

¹ 'Neither neither' in the original.

of Lombard Street, to be of finer and stronger fibre than flax. This is intended for manufacture into cloth and rope, to test its qualities in order that, should your Lordship please, a report thereon might attract the attention of the Indian public to its extensive cultivation. We propose also to send the seeds and living trees called Motsikisi. The seeds yield both a hard fat and an oil which are objects of export at Inhambane.

Dr Kirk the botanist has a collection of dried plants ready for transmission home by the first opportunity.

I am etc.

DAVID LIVINGSTONE

Date. River Zambesi, 31st May, 1859.

RIVER ZAMBESI, 26 *July*, 1859

The Right Honourable

The Earl of Malmesbury

MY LORD,

I have the honour to acknowledge the receipt of your Lordship's dispatches Nos 1. 2. 3. and 4, with the enclosures on the 10th of June last and, a fortnight afterwards I had the great satisfaction of conveying to Major Secard at Tette the thanks of Her Majesty's Govt and it is certain that the honour was highly appreciated.

In reference to the extract from the 'Diario do Governo' containing a copy of a grant of land to a German Society of Colonization, it is matter of regret that the concession was not coupled with the condition that the Colonists should not possess themselves of slaves on pain of forfeiture of the privileges conceded, for though there is no great probability of Germans carrying out the benevolent intentions of the Government of Portugal, in view of colonial Portuguese disregard thereof, it would have been a fresh protest against the evil and a reservation of power which might be very useful in the event of that Government possessing more faithful Governors. Were the proposed Colonists English there is not the shadow of a doubt but that the above condition would render, at no distant period, Portuguese slave-holding impossible.

That my opinion of Portuguese Governors may not seem harsh, it may be mentioned that each one becomes well aware by means of slaves and others of every public and even private transaction in his district and yet ignorance is often publicly assumed.

The Governor of Quilimane for instance allowed Mr Cruz to carry on regularly French emigration by means of hundreds of chained negroes for upwards of a year, and then when the Governor

General of Mosambique noticed the transaction in the Bulletin, permitted this person (Cruz) openly to depart for Bombay in the yacht 'Filipino', where, in all probability, he will remain until he can, without compromising His Excellency, renew the traffic. If the colonists are allowed to come up at once to Tette, they will in all probability be successful.

We have run a shaft into one, and that not the largest exposed seam of Coal, a distance of twenty-nine feet and, according to Mr Rae, our Engineer, with a good draught it is of first-rate quality for steaming purposes. To this branch of industry they¹ might begin at once without a farthing of expense in sinking shafts.

To other sources of gain they could have access with great facility, as Cotton, Indigo, Buaze, and valuable woods.

Though Tette itself is comparatively sterile, the adjacent lands are fruitful and healthy, but should the Governor of Quilimane turn them aside into the lowlands of the Delta or Shiré, as it is reported he intends doing, the effect in the first unhealthy season will be disastrous.

We enclose the result of our experiences in a paper, the joint production of Dr Kirk and myself, on the African Fever which we beg to submit to the judgement of Sir James Clark and, if it be deemed worthy, for publication in one of the Medical journals. An advantage is probably gained by being attacked *first* by the milder type of the disease on the highlands. The same end would be accomplished by going one hundred miles up the Shiré to the Highlands which we lately discovered there.

Enclosure No. 2 contains a Report on the navigation of the Zambesi and, as that subject has been discussed before the Royal Geographical Society and curious assertions made on the grounds of a mere theory, as that wheat cannot grow in certain latitudes at the level of the sea, while we have it flourishing before our eyes, and that 'cotton', which my brother Mr C. Livingstone, who understands the subject, pronounces to be so good as not to require the seed to be superseded by the American, is not fit for the mills of Manchester, it may be well to submit the report to that Society. Mr Laird, the engineer who contracted for the steam Launch of the Expedition, volunteered a public defence in the same place, though I have already informed your Lordship we have suffered severely by trusting to him.

The Launch, only one sixteenth of an inch thick in the bottom at the beginning, is now worn as thin as an old copper kettle and many holes are made in it which we stop by the novel mode of

¹ Apparently the colonists.

puddling with about a foot of clay. If she carries us again up the Shiré and floats long enough for us to examine Nyinyesi and return to Tette, we shall have taken all the good out of her possible.

We discharge the Kroomen into H.M.S. Persian as they are useless on land journies, and the vessel is incapable of carrying them and the Makololo needed¹ when we go on foot.

We discharge also Quarter Master Walker as an invalid: he has behaved exceedingly well but having had several attacks of fever and a slight inflammation we accede to his wish to go to Hospital at the Cape.

I am unfortunately obliged to report unfavourably of Mr Richard Thornton, the Geologist. Whether from the effects of climate or otherwise he has been so extremely lazy, I was forced to stop his pay on the 3rd of May last.

Mr Thomas Baines, the Artist and storekeeper, having been left in charge of the Expedition's stores at Tette, secretly gave away quantities of goods to certain Portuguese, and as he afterwards confessed having done so and his head was actually affected when he had fever, it was thought right to give him the benefit of the doubt as to his sanity in the breaches of trust of which he was guilty: but it became known that he had wasted the artist's materials painting Portuguese portraits and neglected his duties as storekeeper altogether, yet took great care of his own private property. I have felt it to be my duty to stop his salary also from 30th July currt.

An early opportunity will be embraced to give full particulars respecting these unfortunate cases. They are mentioned now only because a Man of War is waiting off the Kongone to receive this despatch. We cannot take either of them on board because we are on our way to the Lake region and detention in a cramped vessel like this in the lower Zambesi till our return would be prejudicial to their health. They are both at Tette where they have their usual rations and an opportunity of doing a little in geology and painting unconnected with the Expedition. Their state of health, or rather weakness, prevented them being kept under my own eye. They could not rough it in the field, and would not obey the officer left in charge of them. With Dr Kirk, Mr C. Livingstone and Mr Rae the Expedition is much more effective, as we can move anywhere in company with the Makololo, forty-six of whom are now engaged to work the vessel and go [to] Nyinyesi.

By H.M.S. Persian we transmit one box and two casks of Buaze for Messrs Pye Brothers, 80 Lombard St. London, to be manufactured into cloth, bleached and tested. We send at the same time

¹ So in the original.

seeds of Buaze to Natal and to the Cape of Good Hope with some also for India. There are 17, seventeen, young trees of the Motsikiri which yields a fat valuable in commerce.

His Excellency Sir George Grey will send them on to Calcutta Botanic Garden and as Mr Pye will undertake the manufacture of the Buaze, should your Lordship deem it right to communicate the result to the Indian Govt a good service to that country will be effected.

We shall endeavour to send more Buaze and Motsikiri seeds as opportunities offer. We send also a box containing molar teeth of Elephants at different stages of development in accordance with the instructions of Prof. Owen of the British Museum, and specimens of *Lignum vitae*, ebony and ironwood for Glasgow and a small box containing insects and specimens of cotton from the Shiré for J. A. Turner, M.P. of Manchester. All are addressed so as to find their way to their destinations without trouble if the Foreign Office frees them at the Custom House.

Your Lordship's
Most Obedient Servant

DAVID LIVINGSTONE
Consul
Commander Zambesi Expedition

Report On the Navigation of the Zambesi

In endeavouring to form an estimate of the value of the Zambesi for commercial purposes it is necessary to recollect that we were obliged in the first instance to trust to the opinions of naval officers who had visited it, and the late Capt. Parker, together with Lieutenant Hoskins, having declared that it was quite capable of being used for commerce, though the Portuguese never did and do not now enter it directly from the sea. We trusted in the testimony of our countrymen and though we failed to find a passage in by Parker's Luabo, we discovered a safe entrance by the branch Kongone and H.M.S. Lynx, Capt. Berkeley, at a subsequent period found a good channel by the main stream, Parker's Luabo, though we had failed to observe it in a three days' search. This question of a safe entrance from the sea having thus been satisfactorily solved, an attack was next directed to the rest of the river, the subject of this report. It is desirable also to remember that in an experimental Expedition like ours it was plainly an imperative duty to select the most healthy period of the year in order to avoid

the fate of the Great Niger Expedition. Had we come any time between January and April a large vessel could have been taken up as far as Tette, but that is the most unhealthy time of the year and we then looked on the African fever as a much more formidable disease than we do now. We entered the river in June when the river was falling fast, but then the official reports of Capt. Gordon, R.N. and other naval officers were precisely the same as those of Capt. Parker and Lieut. Hoskins. Their testimony however referred to only about seventy miles from the sea, Mazzaro, the point at which the Portuguese use of the river begins. We have now enjoyed a twelve months' experience, which is the shortest period in which all the changes that occur annually can be noted, and we have carefully examined the whole without attempting any regular survey, from the sea to Tette five times over in a shakey craft of the Niger canoe or pot-bellied shape, the top speed of which ($3\frac{1}{2}$ Knots) admitted of nothing being done in a hurry, and may therefore be considered in a position to give an opinion of equal value to that of flying visitors better qualified in all other respects for the task.

As it was expected that my companions should collect other information than I could formerly furnish,¹ and a report on the river would be incomplete without a description of it when at its lowest, I sent the journal of Mr Baines to the R.G.S. which was written at the worst part of the river and in a season said by all to be one of unusual drought. Mr B. was taken up by a southern channel which contained much less water than that which we ascended a month later, but adopting that journal as shewing what the river may again become in a season of drought, I would only add that in passing from the sea to Tette when the river had fallen still lower than at the period when this journal was penned, we were obliged to drag the vessel over three crossings 100 or 150 ft of from 24 to 18 inches of water. It is not, however, to be understood that such is then the general depth. In the broad parts of the river we have three or four channels and the greater part of these channels contains water from 8 to 15 ft deep, even when the river has reached its lowest ebb. But we are often obliged to cross from one channel to another and sometimes from one bank to the other, and it is in these crossings that the difficulties occur. I am not aware that anything has been written on the form of the bottoms of rivers but familiarity with that and the signs on the surface will enable one man to find three fathoms while another will run aground in one or two feet. From our experience of a year in which the river

¹ Apparently on his former journeys when he travelled alone.

was unusually low and the rise deferred to a later than ordinary period, it is certain that a vessel really of 18 inches or two feet draught could ply at all seasons on the first 300 miles of the Zambesi.

At my suggestion a tide pole was planted at Tette by Major Secard and the lowest point the river reached in November '58, that in which 18 inches were found in a few crossings adopted as the low water mark. By careful measurement with the Theodolite the river was found at that point to be (964) nine hundred and sixty-four yards from bank to bank which, if I remember rightly, is more than twice the width of the Thames at London Bridge. At the lowest ebb it contains between 300 and 400 yards of water of various depths. The deep channel of this in which the vessel lay was from 12 to 15 ft deep. As it enables one to form a clear idea on the subject I may mention that we lost an anchor there when the water rose and, the volume of water being always considerable, we have no hope of getting it again by being left high and dry, as a ship is repres[ent]ed at her anchorage in the Niger.¹

At Shiramba Dembe the river is 3490 yards wide or $\frac{3}{4}$ Geog. miles nearly. At Shigogo it is broader, probably 3 miles but large islands divide it into 5 or 6 channels. It is evident that with such an amount of spread of the current of the Zambesi (*word illegible*), very rapid rise of several feet at Tette would be of comparatively small value at Shigogo. We therefore took the precaution of marking a perpendicular rock at the East end of the Lupata, adopting, as at Tette, the top of 18 inches at the crossing as low water mark and carefully measured the velocity of the stream at the most rapid parts we knew. The result obtained both by patent and common logs was that no part of the river below Kebrabasa has a current of 4 Knots. We were particularly suspicious as to the correctness of this result, as some of our naval friends, judging from sight only, spoke of six and even 8 Knots, but remeasuring the common log and observing the Patent log hour after hour in parts that this vessel could barely stem shewed no more than $3\frac{1}{4}$ Knots. The general current is $2\frac{1}{4}$ Knots and under. The heights of the river observed by Major Secard in the accompanying table and by ourselves at Lupata and elsewhere may therefore be considered applicable to the whole stream. The amount of fall noticed also in the table being only once down to $7\frac{1}{2}$ feet, shews that the character of mountain torrents cannot be applied to the noble Zambesi any more than it can be to the Nile.

From November to January the river rose gradually to 8 ft

¹ Laird's and Oldfield's book: *Livingstone's footnote ad loc, marked by an asterisk.*

above low water mark. From the 15 Janry to the 15th May, it had depth enough for a large vessel, though Major Secard remarks that this year it attained only a minimum height, and the accuracy of this is confirmed by the fact that only a small quantity of wheat is sown, the parts flooded by the river being the parts employed for the crop.

The data now submitted appear to prove that a vessel of two feet draught, such as are necessary on the Mississippi, could run the whole of ordinary years. We know of no other observation on which the navigability or non-navigability of the river can be pronounced upon, but leave them for the consideration of those better qualified to give an opinion.

We have in the course of one year cut up into small pieces upwards of one hundred and fifty tons of *lignum vitae* alone, which, according to the average prices in London during 1858, was worth about £700. This wood, when dry, was, in the absence of coal, the only fuel with which we could get up steam, owing to the boiler tubes being singularly ill placed on one side and chiefly below the level of the fire, from which novel arrangement one side remains very cold while the other is hot, like a patient in a palsy, and four and a half or five mortal hours of feul burning are required to get up steam. Yet by incessant labour and a dogged determination to extract all the good possible out of an engine probably intended to grind coffee in a shop window, we have traversed 2350 miles of river.

Now had we been permitted to shew what could be effected in this one branch of river, it is not unreasonable to say that every time the saw went through *Lignum vitae* it might have been to secure or dress a log. Without any great labour we might have cut a thousand instead of one hundred and fifty tons of that valuable wood and given a practical exposition of what may and very probably will be effected by the Germans in Zambesi commerce.

The only paper that reached us up to the middle of June last contained a short notice of a meeting of the Royal Geog. Society in which some interesting assertions were made in connexion with a pretty theory and an engineering flaw that the Zambesi, which under the very serious disadvantage of that flaw, we have actually been navigating, was not navigable at all. If our fellow members will only believe that we have a merry smile on our faces we would venture to move, for the support of the theory, in Parliamentary fashion, that the word *ought* to be inserted, thus, 'Wheat ought not to grow at the level of the sea'. 'Indigo ought not to grow more than a foot high' and 'it ought not to contain Indigo at all,' 'the seeds of cucumbers and water melons *ought* not to contain a fine

bland oil fit for the purposes of the Table, because that would be like extracting sunbeams from cucumbers'. 'The Zambesi ought not to be navigable for commercial purposes and the steam launch Asthmatic ought to have been intended to draw something more than merely grist to the mill.'

It is a pity that Mr Laird volunteered a public assertion in direct opposition to his own official statement which we now have here in his own handwriting, for we go on the principle of breasting whatever difficulties we meet and never blame others if we fail, and would have left unnoticed the saving effected by putting a low pressure cylinder to a high pressure engine, had he not publicly called for a public refutation on a matter of public interest. Instead of intending 'the Launch to tow only', his words were 'Dr Livingstone may calculate upon one ton for every inch of displacement in the Launch and as in the river he may safely load her to the [word illegible], from ten to twelve tons will be available for stores and crew.'

Twelve Kroomen bring her down to 2 feet 2 inches without any fuel, stores or cargo; and instead of ten Knots confidently promised in the same statement, a head wind holds her paddles so that with sixty pounds of steam she is stopped, even going down stream. Without coals—and it was only when left without this fuel that we began to examine this matter ourselves—we can barely keep up with the heavy canoes of the Zambesi, and their speed equals the saunter of a lazy ploughboy.

If there is wind enough to cause a slight purl on the water anyone ascending¹ a river may observe dark blue lines stretching across the stream. These by native pilots are called 'Kwelles' and betoken the edges of banks under water. It may be observed also that one bank or other of the river is worn, so as to be perpendicular and that these perpendicular parts alternate from one side to the other at greater or less distances according to the rapidity of the current. The submerged banks are generally of a semi-lunar form at the lowest edge or part farthest down the stream, and this is invariably the shoalest portion in the whole bank. They lie diagonally to the direction of the river, the angle of direction being less or greater according as the river is high or low.

The Kwelle is the part immediately below the shoal edge of the bank and the importance of knowing them by the blue line and other signs may be judged by the fact that, while in the Kwelle you may have from two to three fathoms up to the very edge of the convex mass, on it you may not have one foot. The formation of

¹ A doubtful reading of a word obscurely written.

these banks it is difficult to explain without drawings. The water actually rolls over and over sideways towards the part of the bank situated up stream, and there lies the deep channel. The proper course is to curve round in the Kwelle till the upper third of the submerged bank is reached, then enter on the bank where you have deep water along towards and in the side which is cut perpendicularly. This is called by the pilots Kokole. Sometimes the semi-lunar banks are placed in pairs and the water between them is very deep, but the furrow of three or four fathoms ends in a shoal triangular.¹ The upper third of the bank, on which in our bright sunshine a distinct bulge is seen, shews the most water is to be chosen¹ for getting out of the deep channel before reaching the shoal. My ignorance whether anything has been written on the subject and desire to wipe out possibly an unmerited reproach by an American author, the Rev. Mr Bowen, that our officers were ignorant of the laws which determine the channels of deep water in the Niger, are offered as excuses for venturing on these few remarks. If I succeed in inducing the better qualified among your members either to point out what has already been done in describing the bottom of rivers or in working out the subject which I have ventured upon, I shall not have incurred the charge of presumption in vain.

In July last year we ran aground perpetually by going ahead straight, while in September, when the river was much lower, Mr Medlycott of H.M.S. Lynx seemed to know the Kwelles instinctively and never touched at all.

These submerged sandbanks are the greatest difficulty in Zambesi navigation. Each river has its own disadvantages. The Mississippi has its snags and, it is said, requires vessels of a peculiar build and only two feet draught. The Hoogly has its own very peculiar difficulties of entrance and so has the landing place at Madras. But difficulties are not impossibilities. A great difficulty, the African fever, is, we hope, rendered less formidable, and in spite of the theory that Europeans cannot live and labour in the tropics, we find that hard work, with the good food most conscientiously supplied by Mr Wilson of Glasgow and a merry heart have secured as fair share of health as we should have enjoyed in London.

(Here follows a section on the trade actually carried on, but want of time prevented it being copied).

DAVID LIVINGSTONE

¹ This passage reads obscurely.

Copy.¹ No. 4.MURCHISON'S CATARACT
ON THE RIVER SHIRÉ

Lat. 15° 55' S. 15th Oct, 1859

The Right Honourable
The Earl of Malmesbury.
MY LORD,

I have the honour to convey the information that we have traced the river Shiré up to its point of departure from the hitherto undiscovered Lake Nyinyesi or Nyassa and found that there are only thirty three miles of cataract to be passed above this, when the river becomes smooth again and continues so right into the Lake in Lat. 14° 25' S. We have opened a cotton and sugar producing country of unknown extent which, while it really seems to afford reasonable prospects of great commercial benefits to our own country, it presents facilities for commanding a large section of the slave market on the East coast and offers a fairer hope of its extirpation by lawful commerce than our previous knowledge of the country led us to anticipate. The matter may appear to your Lordship in somewhat the same light if the following points in the physical conformation of the country are borne in mind.

There is a channel of at least twelve feet at all seasons of the year from the sea at Kongone harbour up to this cataract, a distance of about 200 miles and very little labour would be required to construct a common road past the cataracts, as the country, though rapidly increasing in elevation, in general elevation is comparatively flat near the river. The district beyond may be easily remembered as arranged in three well defined terraces. The longest of these is the valley of the Shiré, which is from 1,200 to 1,500 feet above the level of the sea and exactly like the valley of the Nile near Cairo, but beyond the Cataracts somewhat broader. The second Terrace lies East of this and is upwards of 2,000 feet in altitude and some three or four miles broad. A third Terrace, still further East, is more than 3,000 feet high at its Western edge or about the height of Table Mountain at the Cape, which is often mentioned as the most remarkable mountain in that part of Africa. The terrace is ten or twelve miles broad, being bounded on the East by Lake Shirwa or Tamandua and a range of very lofty mountains. On this last Terrace rises Mount Zomba, which on ascending we found to be in round numbers 7,000 feet high. A mass of the same mountains, 8 or 10 miles distant from our encampment on it, must be at least 8,000 feet in Altitude. These features of the country are mentioned in order to shew that we have very remarkable varieties

¹ Really it is a draft, much worked over.

of climate within a few miles' distance of each other. We travelled in the hottest season of the year, or that called in Western Africa the 'smokes' when, from the burning of tens of thousands of acres of tall grass, the atmosphere takes on a good deal of the appearance of a London Fog, only here it is broiling hot. While we were marching in the Shiré valley or lowest Terrace the air was sultry and oppressive, the Thermometer in the shade even often standing at 96° and the water never under a temperature of 81° , but when we ascended to the second Terrace the air became delightfully cool, and every mile or two we crossed running rills of deliciously cold water. The third terrace was cold and equally well supplied with running brooks, while on the top of Zomba our native companions complained bitterly of the cold. The mountain itself is of large extent and at the part we ascended there is a large valley¹ with a fine stream and much cultivation on the top. Several parts of it are well wooded and Dr Kirk, the botanist, found pepper growing wild, an indication of a decidedly humid climate. On each of the three terraces cotton is cultivated extensively. This is not of the indigenous variety only, but foreign seeds have come up the Shiré to some parts of the terraces and to the Lake region from the East coast. The length of staple to which these imported varieties have attained shews a suitable soil and climate. A good deal of salt is met with in the soils here, and in all probability sea island—the dearest of all cottons—would flourish, for specimens of common kinds were found superior to the Egyptian. The indigenous variety feels more like wool than cotton, but foreign seeds were eagerly accepted by the people from Mr C. Livingstone, and the best means for disarming their suspicions that we might turn out to be [a] marauding party was frankly to state that we came to find out and mark paths for our traders to follow and buy their cotton.

Our route was Northwards to Mt Zomba and then along the valley of the Shiré. The land in the same direction, beyond the Mtn named, contracts into a narrow isthmus between the two Lakes, Shirwa or Tamandua, and Nyinyesi or Nyassa. The entire length of the former is ninety miles, but we could get no information as to how far Nyassa extended. All that the natives on its banks knew was that it went a long way N.N.W. and then turned round into the sea. We reached it on the 17th September, but could not proceed with the exploration as we had left the vessel furnished by Mr Macgregor Laird in a sinking state below the cat[ar]acts. Funnel, Furnace, Deck and Bottom went done² simultaneously after only twelve months' wear. It was a source of constant

¹ horseshoe-shaped valley, 1st reading.

² So in the original.

anxiety to us and, besides being of a wholly untried material, was put together in such an unworkmanlike manner as to subject us to immense labours and loss of time at every step of our progress since we arrived in Africa. We found a heavy swell on the Lake, though there was no wind, and there was no appearance of the water ever rising or falling much from what we saw¹ it. The Shiré never varies more than between two and three feet from the wet to the dry season; and as it is from 80 to 150 yards wide, twelve feet deep and has a current of two and a half knots, the body of water which gives it off constantly, [it] must be large and have considerable feeders. At its southern end the Lake seemed 8 or 10 miles broad and it trended away to the N.N.W. A hilly island rose in the distance. It is small and is called Bazuru. The same range of lofty mountains that lies East of Shirwa or Tamandua appeared as if continued along the N.E. shore of Nyassa.

But the most important point in the geography is this, that the Lakes Tamandua and Nyassa lie parallel with the East coast and all the trade lawful and unlawful, from the Interior to the coast, must cross the Shiré at certain fords in order to get along the narrow isthmus between the Lakes without embarking on either. The principal ford is at the point of departure of the Shiré from the Lake. Here we met a large East coast slaving party coming from Cazembe's country (in Londa) having an immense number of slaves and elephant's tusks. As soon as they knew that we were English they made off by night along the isthmus referred to and, having crossed this, they could diverge either to the Angoxia² river or to Mosambique and other ports on the East Coast. It is highly probable that a small steamer on the Shiré and Lake Nyassa would, through the influence of the English name, prevent slave parties from passing the fords and should our merchants not be obliged to pay dues for entering upon English discoveries for trade by³ a part of the Zambesi unused by the Portuguese, goods could be furnished to the native traders at Lake Nyassa as cheap as they can get them on the East coast which involves a month's journey farther. By purchasing cotton from the people on the banks of the Lake and ivory from the traders who annually come past in great numbers from their tribes far in the West, there is a high degree of probability that we could cut up⁴ the slave trade of a large district at its source. We were in the slave market. The capabilities of

¹ found, 1st reading.

² Indistinctly written and a dubious reading.

³ This part of the text, like much of that preceding, has been so heavily scored with alterations as to be not quite coherent in places.

⁴ ? —off.



the country for the production of cotton cannot be overestimated. There are no frosts in any part to endanger or cut off the crops as in America. The people are said by the Portuguese to be of quick apprehension even in a state of slavery. Unlike the Caffres they have no cattle but are great agriculturists, both men and women working at the employment to which they are addicted and there is no large confederation, so far as we could learn. Each group of villages is nearly independent of the others and, though well peopled compared with the country near the Portuguese, scarcely one fifth of the land capable of cultivation has been under the hoe. The worst feature we observed in the people was the consumption of large quantities of beer and Indian hemp. I saw more intoxication in the forty days of our march than I had seen in other parts during¹ 10 years. It is a sort of silly drunkenness: only one man had got into the state of 'fighting drunk' and he was cured by one of the Makololo thrusting him aside from the path he wished to obstruct and giving him a slap in the face.

I beg leave to submit to your Lordship's judgment a plan in detail which enlarged experience leads me to believe would in the course of time secure the benefits of our discoveries to our countrymen and also materially affect the slave trade, and I beg leave to add that, having invariably discouraged all the speculations for the formation of companies, etc., with which I was assailed at home, this is the first project to which cautious deliberation promises a successful issue.

Presuming that first impressions of the country may be more agreeable than the statements of an old traveller who has seen so much of the same fine region far to the West, I enclose a sketch of our late journey—Enclosure No. 2—by Mr C. Livingstone which possesses both accuracy and freshness. I enclose also a series of Magnetical Observations for the Royal Society by Mr C. Livingstone. They were made a few miles below the cataracts of the Shiré. It was impossible to carry the instruments overland to the Lake.²

Our party consisted of Dr Kirk, Mr C. Livingstone, Mr Rae, myself and 33 Makololo. We marched on foot more than 250 miles and were away from the vessel 40 days. We had no difficulties with the natives, though no white man had ever visited this country before, and we trust that this service will meet with your Lordship's favourable approbation.

I am, etc.

A true copy
D.L.

DAVID LIVINGSTONE

¹ in 1st reading.

² This paragraph is a marginal addition.

Separate.

Enclosure No. 1.

KONGONE, 7th Dec, 1859

In my letter No. 3 dated River Zambesi 26th July 1859 it was reported that Mr Thomas Baines, the Artist and Storekeeper of the Expedition, had been guilty of breaches of trust that rendered it imperative on me to cut him off and stop his salary from 30th July last.

He was left at Tette in order that as a newcomer he should not be exposed to the malaria of the lower part of the Shiré to which Dr Kirk and I were proceeding. On our return we found that he had become acquainted with certain Portuguese who may be ranked with our ticket-of-leave men, and considerable quantities of provisions had been secretly made away with. He had also employed the Expedition's time and material on painting the portraits of his new friends instead of performing the work I had given him written orders to do, and without leave from the officer in charge had taken the whale boat and gone off sky-larking with the same low characters, left it with the mast standing and, a storm coming on, it was swamped and left almost entirely useless.

These and other acts of a like nature made me inclined to believe that his head had been affected by fever and I resolved to give a man who had been recommended by the Colonial Office of good behaviour in the Australian Expedition under Mr Gregory the benefit of a doubt, but on leaving him again in charge of our stores he 'begged to be permitted to remain with the Expedition without any salary'. This appeared to be his own verdict of the nature of his shortcomings. I was not then aware that he had taken the private property of his companions and transferred it to his own boxes, as also the public property, and offered to barter it with one of them for private goods, but as soon as I knew this and took it in connection with his confession before Mr C. Livingstone and Mr Rae, of having secretly given away Expedition property to the Portuguese, I concluded that it would be unjustifiable in me to retain his services.

We might have removed him from the country but must have deferred our discovery of Nyassa for a time, and this we did not feel inclined to do. I left him therefore rations and the use of the Artists' materials at Tette in order by employment to keep him in health. He had rewarded this kindness by stirring up these Portuguese against us, shewing my order of expulsion containing *his own* confession of having given away our goods to them, as if it were a new charge against them by me.

The Launch being unable to proceed from the Shiré up to Tette,

Dr Kirk and Mr Rae went overland and brought Mr Baines away. He however left his luggage, in which there was a great quantity of Artists' materials abstracted, we believe, from those of the Expedition, notwithstanding my order to bring all.

On coming here an opportunity was afforded him to give explanations respecting the goods which have been made away with while under his charge, after being first warned not to criminate himself. We limited the matter to a few points.

A large quantity of white sugar was made away with; he asserts that it had been used, but we have the evidence of the members that the assertion was false and false entries were made in the store-books. One whole barrel is not even accounted for there, though he had ample opportunity of writing down anything after his dismissal, the book remaining with him for some months afterwards while we were absent at Nyassa.

A piece of navy canvas was found in his private luggage. This he was seen taking from the Launch and he tried to exchange it with Mr Rae for a piece of drill or duck, his own private property.

I mention a few only of Mr Baines' misdeeds. I wished to be as lenient as possible and, being anxious not to lose the services of an Artist in a country where there is much of public interest, I may appear to have been over much so, but I am convinced that the course I have adopted is the best for the English name. His example would do no harm among the Portuguese out here, who are generally the lowest of the low in all manner of vice, but it would do harm among the natives whither we hope soon to proceed.

Mr Baines desired to go up the country as a private adventurer and proposed that we should leave him at the entrance to the Kongone and leave him to find his way up, but besides being incapable of the fatigue, a fine tale of persecution could be concocted from our leaving him in a wild country alone, and he has made fair attempts to damage the Expedition in the eyes of the Portuguese already.

We therefore send him off to England by H.M.S. *Lynx* for Natal and the Admiral Sir F. Grey will forward him home.

DAVID LIVINGSTONE

Separate.

Enclosure 2.

KONGONE HARBOUR, 7th Dec, '59

The case of Mr Richard Thornton, the Geologist of the Expedition referred to in my letter No. 3 of 26 July last, was one of complete collapse consequent on change of climate and associations.

He was highly recommended by Sir Roderick Murchison and

on first coming out shewed he possessed good abilities. His efforts in drawing a chart of the river were very praiseworthy but no sooner did we arrive at Tette than he lost all appearance of energy. A slight touch of fever seemed to prostrate him and we could never rouse him to any exertions afterwards. On going to Kebrabasa rapids I took him with me but was obliged to leave him on the road.

He was then ordered to do a little work in the vicinity of Tette as the centre of a sphere of operations, and very important as it is probably one vast coal-field; but he did nothing.

I then sent him out to some coal beds which I had examined in 1856 and he returned to inaction at Tette in the course of a few days.

Men were then got to run in a shaft into one of the seams, to ascertain the quality of the mineral, but though a mining Geologist, he either could not or would not teach them to mine.

The Commandant of Tette volunteered to give him men to go to whatever part of the district he might choose to geologise in, but we could not rouse him to action. I took him aside and spoke to him earnestly about his entire failure of duty, and Mr C. Livingstone and Dr Kirk did the same, but all without effect. After 8 months, in which he did not do 8 days' work I was compelled to inform him that his salary must cease on the 3rd of May last.

He attempted to induce Dr Kirk to invalide him, but the symptoms enumerated did not amount to anything.

Leaving him at Tette in order not to be hindered from our journey to Nyassa, Dr Kirk and Mr Rae performed a most arduous journey overland from Shiré to Tette in order to bring Mr Thornton and Mr Baines away for shipment home. This was at considerable expense to us, but Mr Thornton had then, after all, gone up to Zumbo in company with a half-caste Portuguese trader. The exertion required for walking thither shews that he was capable of working, had he chosen when in connection with us.

DAVID LIVINGSTONE

Enclosure 3.

Private. No. 5.

Our efforts in the region of Lake Nyassa cause considerable jealousy among the Portuguese. They are totally ignorant of the country and, were they aware of the commanding position we should occupy by a station between the two Lakes, would probably do all in their power to prevent our entrance. It is highly probable that they would see that their slave market would be dried up by the introduction of lawful commerce. I have therefore to put your Lordship in possession of the fact that the country whose resources

we propose to develop is quite beyond Portuguese knowledge. This is evident from the fact of their asserting the passage of two black Portuguese from Angola to Mosambique without seeing lakes lying right in their paths, and the eagerness with which Governors question the Makololo and repeat statements respecting countries we have traversed which these natives, who rather pride themselves on our discoveries, have purposely answered wrong. A Sr Candido of Tette declared that he had discovered a Lake and I was inclined to believe him, but he points it out in an opposite direction and gives such accounts of it, though calling it Nyanja, that we doubt his veracity, unless there is another large Lake to the N.W. of Tette.

If I might venture a suggestion, it would be to press on the Portuguese Government the desirableness of declaring freedom of settlement¹ and navigation through their territories to countries discovered by foreigners, for the sake of developing the resources of those countries by foreign enterprise. Advantage would accrue to them from this line of policy and no diminution of territory ensue. The foregoing suggestion is made on the supposition that they have the right to refuse free passage to countries beyond their dominion and even without the limits of their geographical knowledge; but I am not sure that such is the case.

DAVID LIVINGSTONE

Despatch No. 6.

KONGONE H.
9 Decr, 1859

Inclosure: Despatch and circulars.

Inclosure: Reasons for being on sea coast in Novr and Decr, 1859.

Acknowledge No. 14 of Dec. 1858. Answered inclosure on Zambesi navigation in No. 5. State that I had received the following circulars. Jany 5, June 1-13-18 on 3 of Decr '59.

Lost a mail bag on bar: if any despatches were sent after 1, 2, 3, 4, '59 they are lost.

Leak forced us down to beach vessel—tinkering—salted provisions—acknowledge kindness of Admiral Grey.

Inclosure 2. In consequence² of the defections of our artist and storekeeper it has been necessary to impose the duties of storekeeper on our leading stoker William Rowe and to promise that an addition to his pay of £66 be recommended to your Lordship. Should this step meet your Ldsp's approbation his salary will be

¹ *A marginal addition marked to follow 'settlement': already conceded to a German Society of Emigration.*

² *'2 or 12 Dec' appears after consequence.*

£150 per annum, and I may take this opportunity of stating that he makes himself generally useful and from his uniform good conduct and trustworthiness he is of great service to the Expedition.

D. LIVINGSTONE

Journal A.4

No. 5.

KONGONE HARBOUR, 20th Novr, 1859

The Right Honourable Lord John Russell.

MY LORD,

In the despatch numbered 14, dated 10th Decr, 1858, received by me on the 2nd current, there is an inclosure, the translation of a note of Novr 16th, 1858, on the subject of free navigation of the Zambesi, and H.M's Secretary of State for Foreign Affairs has been pleased to invite any observations I have to make thereon.

In ascribing the falling off of the revenue in the Portuguese possessions to the defective organization of the Crown lands, His Excellency the Portuguese minister does not, as it appears to me, even touch on the real causes of the failure of the resources of the district.

The slave trade to Brazil was the primary and almost sole cause of the evil, in as much as it effected such a depopulation of the country as completely to destroy the power the Portuguese possessed by means of armed slaves and retainers. This state of weakness encouraged the rebellion of certain half-caste Asiatic Portuguese who not only weakened the loyal subjects still more by harbouring fugitive slaves, but settled on the Crown lands and held them in defiance of the Government.

Until very recently no rents were obtained from these rebels, and indeed some of them were at open war with the Portuguese since we entered the Province.

Another cause of the failure, and from which there is no hope of relief or remedy, was the irruption of Caffre or Zulu tribes from the South. The people, retiring before the Dutch Boers adjacent to Natal, fell on the Portuguese, who had no means of repelling the invaders. The Zambesi presented an insuperable barrier to their progress and, but for that river, not a single Portuguese would now have been in the country. All the lands South of the Zambesi, except small portions in the immediate vicinity of Senna and Tette,

are now either under Zulu rule or depopulated. One plantation or estate, called Shupanga, which is valuable on account of yielding timber large enough to make the great canoes in use on the river, is rented from the Zulus for a tribute of six hundred dollars annually, while the rent to the Portuguese Government is four hundred dollars only, and there is not the smallest possible degree of probability that the redistribution of the Crown lands by 'Statute 22 Decr, 1854' will effect favourable results in lands hopelessly cut off from Portuguese territory.

Whatever may have been the position of the Portuguese establishments in former times, they cannot now be considered Colonies.

No free women or voluntary agriculturalists are ever sent out to them. The class called 'Incorrigibles', to the number of 300, have just made their appearance, and these are intended to spread Portuguese influence and power.

The stations are in fact small penal settlements separated at wide intervals from each other; and the only trade carried on is chiefly in the hands of the officers who thereby augment their military pay. They assert that without this they could not live, as the salaries are insufficient for their support and seldom paid.

The question of free navigation of the Zambesi is of primary importance to Europeans. As matters now stand a few Portuguese, chiefly of the military class, reap all the gain of the trade already established, and prevent effectually the developement of the other resources of the country by foreign enterprize.

No English merchant would enter the river for trade and pay dues to Portuguese officers who would not even pretend to protect him.

The Portuguese Govt at Lisbon kindly sent out orders to its officers to render my party 'every protection and assistance during my stay at the ancient Fortress of Zumbo'. This fort was abandoned in 1793. I discovered the ruins of it in 1856 but could not learn its name from the natives about it. No Portuguese can go to it and a few half-castes only reach it occasionally for the purpose of trading by paying a heavy tribute to the native tribe adjacent.

In a conversation with the Commandant of Tette about the above-mentioned orders, he replied 'What protection or assistance can we render? You can go where we dare not enter.' The case is very much the same as if their countrymen at Macao or the Dutch in Japan should demand dues from all traders to these countries, on the ground that their respective courts in Europe laid claim to grand territorial sovereignty.

The question becomes of the greater importance in consequence

of our recent discoveries up the river Shiré. We enter from the sea by the Kongone mouth of the Zambesi. This entrance, as well as that by the Luabo, is an exclusively English discovery. We ascend the river through eighty miles of Delta before we reach the point where the Portuguese use of the river begins. Our progress in discovering this highway resembles that of the English in finding that the Nun was an eligible entrance into the Niger. Even so recently as July last slaves were sent down to follow us through the Delta and inform the Portuguese Governor where we had discovered a navigable branch and harbour. They are still at the trouble and expense of carrying all their merchandise overland from the Zambesi (at Mazaro) to the river of Quillimane and dare not set up a Customs House at the Kongone for fear of the Zulus who possess all that region, though it is believed they have received orders from Lisbon to that effect.

We discovered that the Shiré was well adapted for steam navigation upwards of one hundred miles from the confluence. The Portuguese knew only a few miles of it and nothing at all of its navigability. We have opened a vast cotton field above the cataracts. The importance of this region for dealing a decisive blow to a large section of the slave market one cannot well over-estimate. The French will not give up that slave trade which they began under the sham of Free Emigration. They are now busily engaged in the traffic at Angoshe river and it is reported that the Portuguese, Sr Cruz, has transferred his operations to the same river. It is for the sake of the free passage of English merchants and merchandize into the heart of the market that supplies the East coast with slaves that I would press on H.M. Government the great importance of securing free navigation of the Zambesi.

It is true that the ivory brought to Tette and Senna comes from countries much beyond the Portuguese territory, but the tracts of country to which free passage is desired are situated much beyond the Ivory market visited by Portuguese agents. On the West the possible encroachment would be on the Cape market, and on the N. East on that of Zanzibar, and there is this important consideration that at present the Home Govt derives no advantage from the exclusive policy pursued.

It is admitted, if I mistake not, that neither rents from Crown lands nor dues from exports at Quillimane suffice for the maintain¹ of the Govt staff there, and the first step towards the regeneration of the trade would be the abandonment of the 'dog in the manger' policy and a proclamation of free trade on the Zambesi and all its

¹ So in the original.

branches as an invitation to foreign enterprize. As this was virtually done in the Concessions to a 'German Society of emigration', equal privileges would surely not be denied to the English.

I have, etc.

DAVID LIVINGSTONE

Suggestions

for the extension of lawful commerce into the slave market of Eastern Africa.

Presuming that H.M. Govt has acceded to our application for a proper steamer for the Zambesi, it is proposed that the first service of that vessel should be the accurate survey examination of the river Rovuma, the mouth of which is situated about Lat. 10° S. and beyond the claims of the Portuguese. It has been visited several times by H.M. Cruizers, and found to possess a safe and deep entrance without any bar. It is reported by the inhabitants to be navigable for fifty leagues inland and, as put down in the Admiralty chart, coincides exactly with what we suppose to be the upper end of Lake Nyassa. It agrees too with the statement of the natives on its shores that 'the Lake went a long way to the North and then turned round to the sea'. An intelligent woman stated that she had gone from the Lake to the sea by going along its banks while her master pursued the same course in a canoe.

The vessel might find a better way into the Lake than that by way of the Shiré. Not, however, without cataracts, for a thousand feet of altitude between Lake and ocean have to be accounted for, whichever way is pursued. But should the Portuguese obstinately refuse free entrance by the Zambesi, the Rovuma may be a pathway out of the way of their claims.

This steamer might, with the permission of H.M. Government, do good service by affording free passages from Eng. or from the Cape of a few volunteer settlers of good character who might render essential service to the cause of African civilization and the production of the raw materials of our manufactures, by giving an example of lawful trading and improved agriculture. There is no doubt but the chief hope is in the Africans themselves, yet the presence of a small body of Colonists, with their religious and mercantile institutions, industriously developing the resources of the country, would materially accelerate the movement. It seems essential that, though aid may be given to settlers in the matter of conveyance, everything else should be exclusively at their own risk.

In a country like the Highlands of Eastern Africa, where the

people are all agricultural and where people of various tribes come and settle down to cultivate crops while pursuing trade without being considered intruders, it would conduce to the permanence of amicable relations were it distinctly understood that Europeans were exactly in the same position as native squatters. It may seem premature to advert to this when so much remains to be done before the way is fairly open for settlement, but it seems right to mention the impressions made on the mind by the magnificent healthy region we have discovered and remembering the sore evils which press on our overcrowded population at home, while the great Father of all has provided room enough and to spare for all His offspring. It is to be borne in mind that the tract of country which so delighted my companions by its beauty and numbers of running rills at the driest season of the year is but a small corner of hundreds of miles which I passed through to the West almost unoccupied by Man and which, from its fertility and abundance of water, is quite capable of becoming a counterpoise to the American Slave states.

Should your Lordship deem it advisable for us to prosecute our enterprize on Lake Nyassa, our operations would be very effectually aided by a small steamer capable of being unscrewed into pieces of 300 lbs or 400 lbs each. A vessel of this kind would not cost more than £2,000 and on reaching the cataracts of the Shiré or Rovuma, could be unscrewed and carried overland in, say, two strong Scotch carts drawn by mules. Four volunteer sappers, with her crew, would be all we should require for the work. Disciplined Europeans are much better than Kroomen, and privates of good character at double-full pay are preferable to most Europeans, especially of that class that readily engages in what seems romantic and instantly collapse on coming to hard matter-of-fact toil. The sappers could aid in the formation of a common road alongside the cataracts, and in the erection of block houses where it may be necessary to erect a trading station and, in cases of failure of health, might be shipped to the Cape in H.M. Cruizers and their lives saved.

The Admiralty usually objects to small vessels, such as that proposed, being sent across the ocean but the Messrs Tod and Macgregor of Glasgow, who may safely be trusted with this matter, have sent out steamers, drawing 30 inches only, to Australia.

A model of one will be submitted to Capt. Washington, should your Lordship be pleased to take the plan into consideration. The expenses of the Expedition would not be much increased by the adoption of the foregoing suggestions, as the failures of the Geo-

logist and Artist diminishes the salaries to the amount of £650, and my assistant, Mr C. Livingstone, is ready to take entire responsibility of the trade for a time. Only some time is necessary to make arrangements for the regular transmission of merchandise from Eng[land], the formation of Depots above and below the cataracts to store produce, and arrangements with the native chiefs will be proceeded with as soon as we know that our plans are in accordance with your Lordship's policy.

D. LIVINGSTONE

KONGONE 6 Dec. 1859.

No. 7. (2 Inclosures)

TETTE, 7 Feb'y, 1860

The Rt Honble

Lord John Russell

MY LORD

Reverting to the considerations stated in No. 5, which might be urged in order that the Portuguese Gov[ernment] should concede the freedom of navigation on the Zambesi to all nations, a very important admission has been made in a letter of 9th July last from the Governor of Tette to the Portuguese commissioner Duprat, and published in the Cape Argus of 18 August following. The Governor says, 'it is said that our (Portuguese) Government is about to establish a post (custom house) at the bar of the Luabo (Zambesi) and from thence to carry on direct trade with this district. Should this take place great advantages would result to this country and to Livingstone's great glory because *he was the first who passed over from the sea by this way of communication*'.

The reason why the exploration of the mouths of the Zambesi was left to English enterprize is this: the Portuguese line of discovery ran from Sofala to Senna and thence to Quilimane, which is situated on another river. They knew the Zambesi in the Interior in the same way that we knew the Niger inland long before that river was explored from the Nun. It is possible that slaves may have been shipped from the mouths in question by African-born Portuguese, but the Government of Portugal was ignorant of the whole matter, and until the publication of my work it believed that the Zambesi entered the sea at Quilimane.

The slave trade has depopulated the lower Zambesi lands so greatly that we have been compelled to live on salt provisions from the sea to Tette. The Portuguese Government derives no advantage from those lands, but it is put to a very considerable annual outlay in fostering a paltry trade in ivory, the advantages of which are reaped

by Bombay, Bourbon and the Americans. There are no regular exports to the mother country, nor do any merchants return to spend African-made fortunes there. The soil and climate are far superior to those of Natal, but the effect of the country being devoted to the exclusive use of a very few Portuguese, either of the convict class or guards of the same, is that, while settlers at Natal export Tapioca and sugar which enrich the producers, nothing is exported from the Zambesi but ivory, and common vegetables cannot be had for either love or money. There is no hope for the development of the rich resources of the country except in foreign enterprise. My own anticipations of success rest on districts considerably removed from the deleterious influences of Portuguese penal settlements and slave trading. But it seems indispensable to prosperity that freedom of access be secured, and there is no room for doubt that our success would promote the welfare of the Portuguese.

In a recent conversation with the Governor of Quilimane I learned that the attention of the Portuguese is turned to admitting the French as Colonists into this country. He said that Portugal has no emigrants to spare for Africa. It is all but certain that this gentleman was fully cognizant of slave emigration carried on in his district by Sr Cruz, for each Govr is made aware of the smallest event that transpires. There is not an elephant even killed without his knowledge and subsequent claim of one tusk. He is known to be friendly to the French and avers that [? after] the failure of the 'German Society of Emigration', to which large concessions were granted by the Govt at Lisbon, it is natural to turn to France. The introduction of French Colonists into Eastern Africa would be a death blow to our hopes.

I am etc.,

DAVID LIVINGSTONE

A true copy
D.L.

In the inclosure marked Separate No. 2, the reasons for Mr Rae's return on service are stated, but his continuance on duty is contingent on your Ld's decision.

Inclosure in No. 7 marked 2 'Separate'.

MY LORD

KONGONE, 27 Feby, /60

The services of Mr Rae, our engineer, being no longer urgently needed in this worn out steam Launch, it appears to me that, should your Lordship sanction the suggestions for developing

the lawful trade of Lake Nyassa and cutting off the supplies of slaves from various ports on the East coast, Mr Rae might be of more service to the Expedition at home than he can be, for some time at least here. He is thoroughly trustworthy and, besides great nautical experience in his profession, possesses knowledge of the kind of vessel necessary to navigate the rivers and lakes we have lately discovered and the presence of which on Nyassa would not only impart security to settlers but effect more without firing a shot than several steamers on the sea. He has behaved exceedingly well all the time he has been with us and, as he feels so much interest in the undertaking as to offer to invest his savings (£200) in the vessel, his superintendence would secure everything being done in the most workmanlike manner. This, to us who have undergone so much vexation, delay and toil from a dishonestly constructed vessel and engine, appears of the utmost importance. But he understands that, should your Lordship deem it inadvisable to forward our plans, his period of service will expire on delivering the botanical collection with which he is entrusted. I earnestly hope however that after we have so far cleared the way and by patient investigation and experiment at the risk of life rendered the fever not more formidable to persons of common prudence than a common cold, found access from the sea into good harbours into the main stream of the Zambesi, and discovered a navigable pathway into the magnificent Highland Lake region which promises so fairly for our commerce in cotton and for our policy in suppressing the trade in slaves, that your Lordship will crown our endeavours by securing our free passage through those parts of the Zambesi and Shiré of which the Portuguese never have made any use, and by enabling us to introduce civilization into that vast region (the form and fertility of which, with the disposition of the inhabitants, though first brought to light by solitary report, have been fully confirmed by Captain Burton and Speke)¹ in a manner which will extend the honour and influence of the English name.

The botanical collection formed by Dr Kirk with great labour and in very unfavourable circumstances from the wetness and want of space in our vessel, is intended to be submitted to Sir William Hooker, who will no doubt give a report as to its value. The want of accommodation for reference to his numerous notes has prevented Dr Kirk from giving a detailed report of the fertility of the country and the Economic value of its products, but all his researches fully

¹ The first draft of the passage 'introduce civilization . . . English name' ran as follows: introduce civilization in a manner which will extend the honour and influence of the English name. D. L.

bear out what has been advanced respecting the capability of the region North of the Zambesi to yield cotton, indigo, sugar, woods, etc., of the best qualities and in all highlands wheat and other European grains may flourish.

During the intervals in which we have been prevented from pursuing the proper objects of the Expedition and Magnetism,¹ Mr C. Livingstone has made a valuable collection of ornithology, but he laboured under the same disadvantages in the vessel as Dr Kirk, and rearrangement will be necessary. The Magnetical Instruments of the Royal Society have been seriously damaged by the damp. Much of our private property has suffered from the same cause and, remembering the exposure we have undergone to the same influences, it is a wonder that we all continue well and hearty.

DAVID LIVINGSTONE

The Inclosure No. 1 was a copy of Major Secard's letter to Duprat from Cape Argus, Aug. 18th,/59.

No. 8.²

SENNA, RIVER ZAMBEZI
10th April, 1860

The Right Honourable
Lord John Russell.

MY LORD

In confirmation of the statement made in No. 7, dated Tette, 7th Feby, 1860, that the Portuguese officials here were anxious to introduce French Colonists, I have now to add that Senhor Cruz, the notorious promoter of French emigration from Quilimane, lately returned from Bourbon with a sugar mill and coffee cleaning machine, with two Frenchmen and supplies of superior sugar cane and coffee seed, the whole being sent, it is reported, at the expense of the Governor of Bourbon. The Frenchmen however soon both perished of fever.

When news reached this country that the French had bullied the Portuguese at Lisbon, the Governor General of Mosambique issued an indignant fulmination against any one who had promoted French slave emigration, and threatened legal proceedings which served as a hint to Senhor Cruz to retire to Bourbon for a time. It is just possible that His Excellency was ignorant of the regular export of slaves which Cruz carried on from Quilimane during two whole

¹ So in the original.

² Copied by another than Livingstone, perhaps by Charles.

years, but he is the only individual in the province who did not know it. His people generally chuckled over the fact that the English cruizers dared not interfere with the French vessels which came regularly for the Free emigrants in chains, and he is in the habit of protesting to our naval officers that he is falsely accused of having received bribes; and the only thing he has gained by coming out here is the loss of his health.

When Cruz returned lately, as all expected he would do when the Governor General's blast of indignation had blown over, he went straight to Mosambique and received orders to all the authorities here to assist in the formation of a French plantation by every means in their power.

The effect of this scheme of transferring Bourbon slavery to African soil will be increased and perpetual slave hunting. This has begun already, and a 'Portuguese subject' from Quilimane is reported to have 'conquered' the Bajana and led them against the Manganja near Lakes Shirwa and Nyassa. This simply means that a half-caste has induced the Bajana, whom we found to be the principal slave traders in the Lake district, to join him and, with the help of his guns, to kidnap the inhabitants bordering the Lakes who have none, and is probably preparatory to a despatch for Lisbon announcing the conquest of all our late discoveries. The slaves so procured are for the French plantations of Quilimane.

The present system of slavery is mild, chiefly because the Portuguese are so very few in number and because of the facilities the slaves possess of escape to the adjacent tribes, but all the Portuguese would rejoice to see a more vigorous¹ system introduced by the French. A few individuals are our friends, but in general they hate us and our objects, and, should your Lordship grant us another steamer, it would be advisable to authorize us to hoist a pendant.

In October next the brother-in-law of Cruz will have finish[ed] a three years' imprisonment at Mosambique for rebellion and murder. He possessed a stockade at the mouth of the Shiré and by forays enabled Cruz to carry on his emigration. It is confidently reported that he will return to pursue the same system and it was to secure his agency that Sr Cruz is universally believed to have employed bribery in Mosambique. The mildness of the sentence, for some scores of cold blooded murders and open rebellion and war, together with the Governor General's spontaneous assertions of innocence, certainly lends plausibility to the belief.

¹ Possibly a scribal misreading of 'rigorous' in the original.

A fortnight ago we met our friend Major Secard at Mazaro on his way to Kongone harbour to hoist the Portuguese flag there and possibly erect some sort of fort or custom house. This is said to be by orders from Lisbon, but matters are kept as secret as possible from us.

Notwithstanding the open way H.M. Government has acted in communicating our Instructions etc., to the Portuguese, everything we say or do is supposed to mean something else.

As Major Secard was ignorant where the harbour lay, we gave him a sketch of our course through the Mangroves which will lead him to the proper point, and there he will find two flagstaffs ready planted by Capt Berkeley of H.M.S. Lynx which, when in line, point out the proper channel across the bar. In our visit to the harbour in Feby the Governor of Quilimane requested us to shew him where it lay. We met him about eight miles distant from it and pointed out two channels that lead into it, but, after parting, he did not venture among the Mangroves so far. As we knew of no reason for keeping a good harbour a secret, we furnished Major Secard with minute directions for finding it.

For your Lordship's private information I beg leave to state that the Bishop of Cape Town writes to me that, availing himself of a feeling produced by some words I uttered in the Senate House at Cambridge, he called upon 'that great centre of the life and light and science and learning of England to send forth, like the Universities of the olden time, a body of men from its own bosom to seek to win the heathen of Africa to the faith of Christ'; and measures have been taken, in conjunction with Oxford, to give effect to that proposal. The Bishop applied to me for information respecting the direction the mission ought to take and, explaining the difficulties, I pointed out that by the Shiré, as well adapted for avoiding the unfriendly border tribes and as the easiest entrance into that most promising region lately opened by the English discoverers Burton and Speke and by the members of this Expedition. There can be no doubt but that such a mission, aided by lawful commerce, would in time entirely stop the slave supply to various ports on the East Coast.

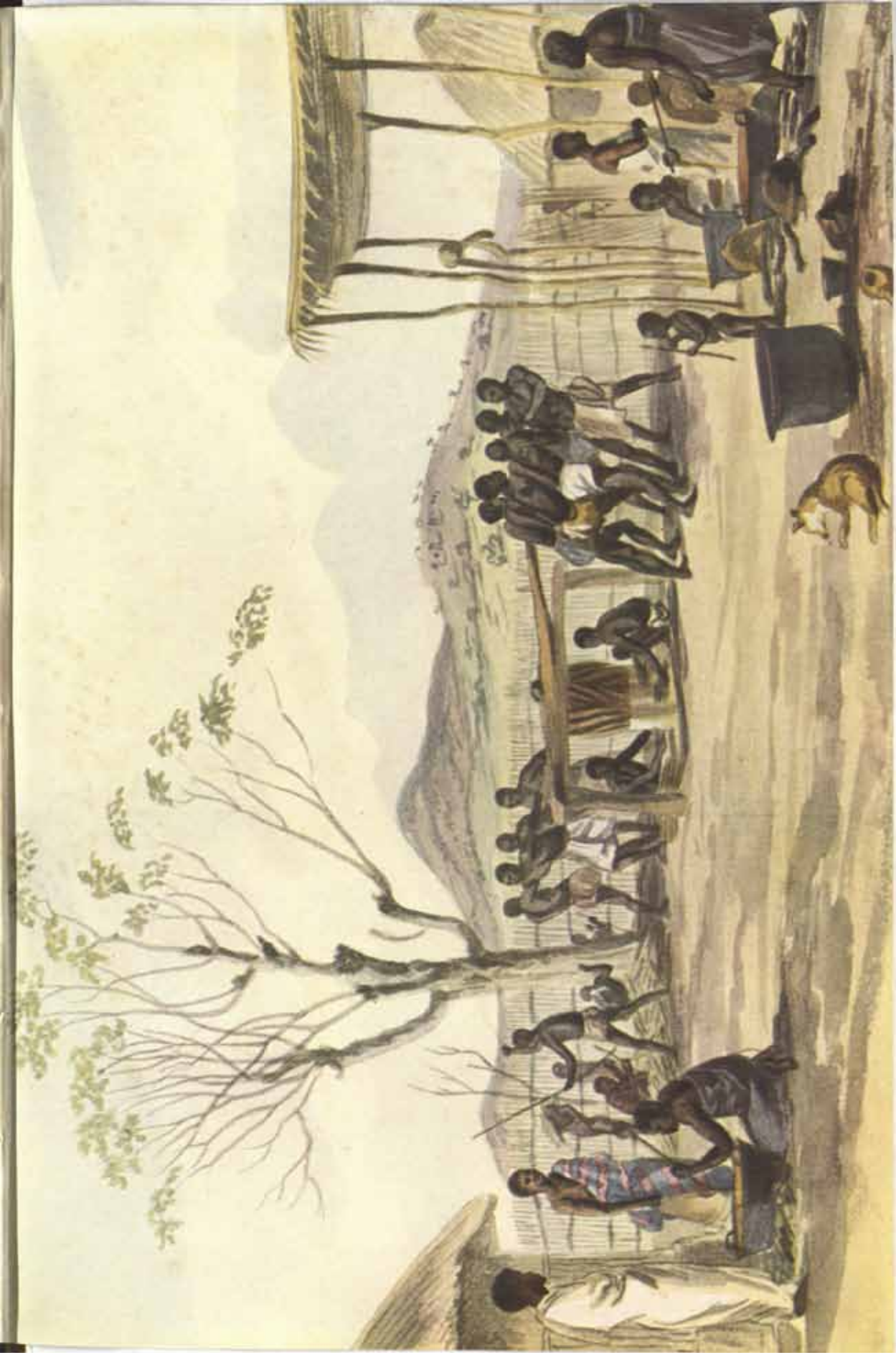
I have the honour to be

Your Lordship's

Most Obedient Servant

DAVID LIVINGSTONE
H.M. Consul

*Manufacture of Sugar on the Katipo Estate, Zambezi River.
General view of the process*



Inclosure No. 1.

SENNA, 10th [April], 1860

The current expenses for fresh provisions, payment of guides on the land journies, wages of the Makololo crew from July last year, and a stock of cloth and cattle for the land journey which we commence next month to the country of the Makololo, have amounted to a sum of (£130) one hundred [and thirty] Pounds and I have taken the liberty of drawing on the Foreign Office for that amount through the Colonial Agent of Sir George Grey, the Governor of the Cape, and I hereby advise your Lordship of the same.

DAVID LIVINGSTONE

Send this receipt to Sir George: £130 Received from His Excellency Sir George Grey, K.C.B., the sum of £130 to be refunded by the Foreign Office to his Colonial Agent on account of expenses of the Zambesi Expedition.

DAVID LIVINGSTONE
H.M. Consul

On 3d page:

His Excellency

Sir George Grey.

SIR

The foregoing receipt is sent that you may again favour us by drawing the amount through your Colonial Agent in London, and I have to beg that you will be good enough to forward the money in gold by the commander of one of H.M. Cruizers to me at Kongone harbour on the 30th November next or,¹ if that is inconvenient, to the care of Colonel Galdino José Nunes of Quilimane, so as to be available by that time.

I am

DAVID LIVINGSTONE

*David Livingstone to the Secretaries of the Oxford
and Cambridge Mission*

(Copy)²

TETTE, 29th November, 1860

The Honorary Secretaries

of the Oxford and Cambridge Mission.

GENTLEMEN,

On my return a few days ago from a trip up the river as far as Linyanti I had the pleasure of receiving your welcome letter

¹ 'of' in the original.² Really a draft with cancelled passages, interlineations, marginal additions and crossings, sometimes so confused as to be incoherent. Yet the document is interesting and relevant as a veteran explorer's thoughts upon the fitting out and general conduct of an African Mission.

of January last, and with feelings of gratitude for the confidence you have placed in me, I beg to assure you that I shall always deem it a privilege as well as a sacred duty to do everything in my power to aid your noble enterprise.

Before proceeding to answer the questions you have put, I must give a little information which you will kindly consider as strictly private. Our Government tried hard to obtain free navigation of the Zambesi from the Portuguese, but the authorities at Lisbon seem determined to stick to the 'dog in the manger' policy hitherto followed. It therefore occurred to me on applying for a steamer to propose as its first service a search for an opening into the interior of Eastern Africa exterior to the Portuguese claims. The Government, I am happy to learn, has granted the steamer and sanctioned my proposal, but silence so far as the Portuguese are concerned is enjoined. As my answer to your first question may be very materially modified by successful exploration of the Rovuma and the caution has reference chiefly to the Portuguese, I thought that I might safely entrust the matter to the bishop of the Cape, to bishop Mackenzie and to you.

The eagerness with which the Portuguese seize every scrap of information that finds its way into the Newspapers in order thereby to dwarf our labours, as well as the injunction of our Government, must be my excuse for requesting you to keep the matter among ourselves. Captain Oldfield has been sent to the Rovuma to explore as far as he can in H.M.S. *Lyra* and we follow as soon as our new steamer joins us.

The Manganja country appears to be the most suitable field yet discovered for a missionary settlement, on account of its nearness to the East coast, its healthy highlands and the entrance it affords to the vast well watered and well-peopled region beyond, both Northwards and Westwards, which I trust will be occupied by your mission.

It must however, be added that the people are far less eligible than the Makololo. They have all the suspicion which the slave trade engenders and to eradicate which much time will be required. The Makololo are frank, and would hail a company of English missionaries not as friends only but protectors, for they believe that their enemies would never attack a mission station. The men who now accompany me have orders from their chief in the event of our ascending the river, to lead us at once to the healthy highlands and then send for the whole tribe. Their language is reduced. The whole Bible is translated into it and they have a very large population under their sway, speak dialects closely akin to those in the North,

whither, there can be no doubt, the ulterior operations of your mission should be directed. It may therefore be worthy of prayerful consideration whether the Makololo might not be an eligible stepping-stone to the grand field in the North, to which it is most desirable that that great body, the church of England, should stand committed. It is highly probable that a good powerful steamer could ascend the rapids of Kebrabasa at the period of full-flood. It would meet no obstruction of importance in plying the whole year from that to near the Falls of Victoria. This would give you great influence in all the tribes, and the success with which the Great Head of the Church might soon favour you among the Makololo would greatly encourage your supporters.

In fairness I must tell you that my judgment may be warped by the very great affection I have to the Makololo. They are a jolly rollicking set of fellows with a great deal of the soldier in their character. They contrast very favourably with the tribes living under them. They are respectful and intelligent, accustomed to guess at the meaning of people of different tribes and would quickly apprehend the instructions attempted to be conveyed by foreigners. He whom you serve, however will no doubt in answer to the prayers of so many of his people who have joined the movement, smooth the way elsewhere should you, after calm deliberation, so decide.

2. I have no hesitation whatever in recommending the possession of a steamer of considerable power. It will be necessary whichever field is chosen. The sense of security a mission usually brings into a country allows a different allocation of the populations from that which the previous state of fear admitted. A steamer would be a home until intimate knowledge of the country and people would enable the bishop to choose a proper locality for a permanent establishment. In procuring supplies in a country possessing no regular trade on the coast, it would save a world of time in carrying merchandise to the Cape and adding to the force of the mission. It would command influence and be a safeguard from the unfriendly coast tribes from whom alone danger is to be apprehended.

The Shiré could be ascended by a vessel of 3 feet [draught] as far as the Murchison cataracts at any season of the year. This is the best pathway as yet known into the Manganja country, and from May to August is the healthiest time of the year. At present no vessels visit the coast except occasionally an American,¹ except by H.M. cruisers on the coast and periodically small trading schooners

¹ 'vessels . . . American', an addition that throws the following phrase somewhat out of gear.

from Bombay in March or April,¹ and a passage by them is purely an affair of favour on the part of the naval authorities.

Should the Makololo be preferred a steamer ought to enter by the Kongone branch of the river about the beginning of December so as to ascend to Kebrabasa with rising water, and there wait till full flood in March allowed a passage. This implies exposure to the most unhealthy part of the year, from January to April, but with our remedy there is no danger to life.

A steamer ought to be capable of doing 12 knots an hour, with furnaces adapted to the consumption of wood. The draught less, if possible, than 3 feet. The sleeping apartments, or all the apartments, furnished with fine brass wire gauze to keep out mosquitoes or with mosquito curtains. This is important for the lower part of the rivers. On the highlands there are few or no mosquitoes or they are not more² troublesome. If I am not much mistaken, there are men connected with the Universities who could give you a steam Yacht and be none the worse.

3rd. The dialects spoken in the Manganja country resemble those of Senna and Tette. Lists of words were collected by persons employed by Dr Peters of Berlin and, as arranged by Dr Bleek, were published by the Foreign Office with the title 'Languages of Mosambique'. The latter gentleman is believed to be a clever philologist, but whether from the operation to reduce the words to the phonetic system or the incompetence of the collectors, the result is such confusion that the missionaries had better eschew the book altogether, though it is the only thing in print.

With the aid of the Sichuana Bible the missionaries could attain a fair idea of the language of the Makololo on the voyage out. If it cannot be obtained from the Bible Society, the Revd R. Moffat of Kuruman, where they have been printed, would supply as many as may be required. In three months after their arrival they might converse with ease, but longer time is required for the purposes of religious instructions.

4th. If I am right in understanding that six missionaries are to accompany the bishop, I beg leave to suggest that the number of attendants should be such as to form a complete but compact establishment. It is very desirable that neither the number of people nor the amount of luggage should form any impediment to the whole moving in one steamer. As a good deal of exercise is absolutely necessary for the preservation of health in this climate, the missionaries might consider themselves as part of the force to be employed in building, farming, etc., in all the preliminary

¹ and periodically . . . April', an addition.

² So in the copy.

operations at least. Those who first spread Christianity in our own land did not disdain to hold the plough when bent on elevating our ancestors from a state of degradation.

One cannot study here as at home and if I might quote my own experience in gardening, building, carpentering, etc., etc., it felt less of a degradation to be a clodhopper than, as we used to say at school, enjoying great fun.

Subject to the very needful precaution of avoiding too large a party and too much luggage at the outset, and trusting also that all my suggestions may be considered as subject to your own judgments, I may venture to suggest that one or two country carpenters, capable of erecting sheds and of turning their hands to any rough woodwork. If the use of the pit-saw were known, it would be an advantage as planks are not to be obtained.

One or two gardeners possessing some knowledge of farming: most gardeners are handy at any field work.

One or two merchants to carry on trade or barter in cotton and prepare it for exportation. Other articles might be bought as well, but this deserves the chief attention on account of its quality being superior to the American and on account of the ultimate result to be expected to our own home industry and on slavery. The merchants, and indeed all, ought to agree to be generally useful.

One general steward of the mission goods and stores: he would regulate the expenditure and his wife might be a good plain cook to the establishment. The attendants should all be married: their wives might be employed in washing, sewing, attending the sick etc., but it is questionable whether the missionaries should have the encumbrance of families in the first stages of the mission. Perhaps it would be better if a missionary believed that he did not deserve such a blessing as an English gentlewoman confers in taking him by the hand, until he had made a comfortable home for her.

Personal piety and an intelligent interest in the progress and success of the mission seem to be indispensable. In the selection particular attention ought to be paid to pious parentage. Those who have been nurtured from infancy in the fear of God and attended from infancy to the means of grace, are most to be trusted for advancing this work. All should be Europeans: there are plenty of black people in the country, and no one having had experience of conducting a mission among the heathen would recommend bringing half-civilized people of colour from a distance. They are quite as difficult to ration as Europeans and much less willing to put up with hardships. Those whom you find in the country will bear hunger more cheerfully and a much lower rate of pay than the half-

civilized: if they come from a healthy climate they are nearly as liable to fever as we are, and a slight attack prostrates them. Two half castes and four blacks went with me to the Makololo country. All took fever on the way and I had to cook, hunt, and attend to them. The slightest relapse afterwards made them all act on the Maxim, of being 'long sick to be soon well' and I was so much their servant that it was a happy riddance when an opportunity turned up to send them all South. In this Expedition our Kroomen even suffered from fever. Native attendants pick up all the improper words of a new dialect with surprising facility and besides improper intercourse with the native women follows. Though unable to prevent it the head of a mission is held to be in some degree responsible and made grievously ashamed. They invariably make the people understand that they are looked down upon as an inferior race, and often consider any favours bestowed on others to be so much deducted from what they, *the prime agents* in the mission, ought to have received. And should they have been conversant with other missions, any variation from what they have been used to—and the Bishop will not, probably, in non-essentials follow any beaten track—on the slightest offence will be quoted to the people to shew that he is heterodox!¹ I was particularly happy in two [native teachers] at Kolobeng, but the family of one was an intolerable nuisance. Were the mission on the border of Cape Colony or on the confines of Caffreland, I would engage all the intelligent natives I could employ, but in a country wholly heathen Europeans are unquestionably the best attendants.

One of the missionaries ought to be a regularly educated medical man without crochets, by a good practical knowledge of chemistry he might shew how indigo could be made and regulate the process of sugar boiling, etc. It is desirable to secure the favourable regard of those noble minded men who devote their lives to the pursuit of scientific truth. Regular meteorological and magnetical observations might be borne in mind for the period of comparative leisure which will follow the hard toil of the foundation. The subject has other aspects. We know but little of the climate more than that, though we have fever, there are remarkably few other diseases and no consumption or scrofula. It is possible that sanatoria may yet be opened for our countrymen threatened with these fearful complaints: at any rate we should strive to make the mission a double blessing—to Africa and England. There is but one hint to offer in the selection, and that is that persons of spare habit, or as we say, of

¹ Cancellations, interpolations and other changes in the text of this letter make for incoherency in a number of passages, as here.

wiry frames, are less liable to be cut off by fever than those of a full habit.

5th. The goods employed in trade and barter are various coloured calicoes, beads and brass wire. The calicoes ought generally to be strong, a kind of hard wide calico from America. Mr Clegg or Mr Turner of Manchester, or Macrindell Shaw of Glasgow, send out quantities to the West Coast and might be entrusted to furnish, say, £300 worth for a beginning. There are various kinds of strong cloth made in imitation of country fabrics which are highly valued, and some kinds of druggets and baize should be introduced to elevate the taste and stimulate to industry. Let the quality of all be good and strong. The fine blue beads, red, pink and white (opaque) are most fashionable among the Manganja. Clear glass beads are to be avoided. We are well supplied by a Mr Kendal, an importer of beads near Cheapside, whose address Captain Washington, H.M. Hydrographer at the Admiralty, would willingly supply, as he takes a lively interest in every movement for Africa. Many Manganja wore beads scarcely $\frac{1}{16}$ in diameter. This is a good size: £100 worth would serve as a beginning. Larger and coarser, of pale red, white, and blue, serve farther inland.

The brass wire ought to be a little over $\frac{1}{4}$ inch in diameter. In many parts of the country guns and gunpowder are in great demand. I cannot participate in the opinion that it is unlawful to sell these articles, as the invariable effect of the possession of these weapons is the prevention of the effusion of blood, and were the interior tribes well armed, there would be fewer slave hunts. By a law of the late Sir George Cathcart, made to favour some Dutch Boers, guns were prevented [from] going inland from the Cape Colony. This sent the trade to the West coast and the Portuguese supplied wretched muskets made, I believe, on the Continent in imitation of the English, and four Makololo have thereby lost their limbs; a fifth was killed on the spot by bursting. A real English musket never burst in the country in my time. I write with all freedom, in the belief that you will not consider me dogmatic or assuming any air of superior information, but anxious to put you in a position to form your own judgment on a matter which will in all probability come before you.¹

The party ought to be well supplied with rifles and shot guns for the sake of game. The Enfield rifle is a very good weapon, but the ball is too small and does not kill until the animals have got away from you. I got a very good killing rifle made according to

¹ Apparently on second thoughts Livingstone cancelled this passage, but it is quoted here as illuminating.

the Whitworth's principle by Mr Goodman of Birmingham. I use Jacob's shells to ensure speedy death, but they are dangerous. The possession of a revolver does good. The moral suasion of one with six barrels is much greater than that with six chambers and but one barrel. There is no probability of attack in the Interior except by Arabs or the coast tribes, but it is well to be prepared.

Two ploughs and one pair of harrows would make a fair beginning. I prefer Ransome's one wheel plough made of extra strength. One used by Mr Moffat at Kuruman is very easily handled and very efficient. It is to be remembered that there are no draught animals in the Manganja country and besides having trained animals with the party, the object of breeding ought not to be left out of sight. Horses for the Manganja and mules for the Makololo country on account of Tsetse that infests both banks of the Zambezi above Kebrabasa.

The carpenters will know what tools are required for rough work with, in general, hard wood. We have found the tools made in Glasgow by ——¹ the best in point of strength and durability. A large assortment is not necessary. A grindstone must not be forgotten and, should they be able to use pit-saws, it would be an advantage. If any one can work as a blacksmith or [? tinman,] a small portable forge and tools ought to be provided, but all respectable engineers furnish their steamers with all the appliances of a Smithy. The gardener will know best what implements are required for plain work and their seeds ought to be hung up in the cabin or other dry well-ventilated spot, for, if put into the hold, the vegetative power will be destroyed. In the selection of drugs the very best quality ought to be got at Apothecaries Hall, London, but the quantity need not be large, say £40 or £50 worth, even though it be in contemplation to treat the natives. Liquids do not carry well: bottles glass-stoppered and stoppers lubricated.

The frank polite line of conduct which is natural to an English gentleman commands most respect. We come with a revelation of our Heavenly Father's love in sending his only Son to die for sinners: and it is best to appear as to appear² as messengers of that love from the very first.

It is never necessary to prove the existence of the Deity. All believe in a supreme Maker and ruler of all things. The assertion that we are all His offspring and that He is displeased to see his children selling each other, and we have brought traders to supplant by lawful goods the trade in slaves.³ I have seen a man slip away

¹ Name missing from a tear in the edge of the paper.

² So in the original.

³ This part of the letter has been so confusedly revised as to be incoherent.

at once to his cotton fields and bring a quantity of cotton to begin the new system at once. Trade in food establishes a certain degree of confidence in a few hours.

It is desirable to ascertain who is lord of the soil. Among the Manganja he is often a poor and uninfluential chief, but all acknowledge him as the hereditary owner by informing him that white men mean to live at such a spot, and after they will be in the same position as the rest of the population. Were the land used for pasturage it would be different. And after the language and people are well known, a formal purchase should be effected. The expense of making all the chiefs witnesses and participators in the profit of the sale is but small and it will save all future trouble. The Manganja are the only people in Africa who do not feel it to be an obligation to feed strangers but no sooner was a present given than a return was made in food.

With the Makololo I have a promise that a portion of the healthy Highland, now nearly uninhabited on account of being open and defenceless, would be at once given to the mission. Here, too, I could make all necessary arrangements, while in the Manganja country, the dialect of which even is unknown, we should be very much on a par as to influence. It ought to be borne in mind again that in some years the flood of the Zambesi is not sufficient to smooth over the rapids of Kebrabasa, and then a discretionary power must be placed in the bishop to go up Shiré or elsewhere, though you at home may have preferred the Makololo. It is very undesirable to leave any of the party among the Portuguese. This my own experience loudly testifies.

Among things which it is desirable you should know I place prominently forward a peculiar kind of irritability produced by the climate, possibly by malaria, as it often, though not always, precedes an attack of fever. It has been noticed and experienced so frequently that we set it down as a symptom of fever when a man thinks himself insulted or slighted, and takes on airs. This may lead to disappointments. Untoward things happen to missionary societies which never meet the public eye; but let us look to the end, the glorious future sure and certain, where they who sow they also reap and all rejoice together. It is God's own work in which we are engaged and we have a pledge of his smile in so many of the good and able servants who have been drawn into the movement.

You may have heard, ere this reaches you, of the sad fate of the London missionaries at Linyanti. They were spoken of as in connection with the Zambesi Expedition, though I only knew of their movements so far that they had yielded to my dissuasion as to

attempting to enter this river by the sea till it had been explored. I was ready to render whatever aid I could, as indeed I am to every mission intended to spread our common Christianity. It was only lately, reaching the falls of Victoria, that we heard of their arrival and unhappy fate at Sekeletu's capital. Our grief was the more poignant in as much as at a lower and worse part of the river we were curing severe cases of the disease in Europeans so quickly as scarcely to interrupt our march for more than a day or two, during the very period these good people were helplessly perishing. The remedy was first employed on my own children and in an English party at Lake Ngami in 1850 and it has never failed in a single case since. It has never been kept a secret, but, besides referring to it near the end of the 'Missionary Travels' I have said little about it. This was chiefly from an aversion to anything like quackery. We were not sure also of its applicability to Europeans generally until the ample experience of this expedition demonstrated its efficacy. With it the fever is not more dangerous than a common cold and, should it prove as useful in the West as we have found it in the East, the expense of this Expedition will not have been incurred in vain. Be assured that I shall most religiously use every precaution for the safety of your mission. I shall not be deterred from doing my utmost to guard their health, though it was extra caution in this respect that induced me to leave two men at Tette and allow them thus to act discredibly.

I add the prescription here, though I have given it already to the Bishop of the Cape: Take of Resin of Jalap and of Calomel, of each eight grains: of Quinine and Rhubarb, of each four grains. Mix them all together in a mortar and preserve for use. When required make the mixture into pills with the spirit of cardamoms. Dose from ten to twenty grains. The operation of this dose in from four to six hours removes all the violent symptoms, as racking pains in the head, back and loins and all the bones, dry skin, thirst, etc. If this time passes, a dessert spoon of salts promotes the operation. Then Quinine in four or six grain doses every two or three hours till the ears ring or deafness ensues, completes the cure without, in general, any loss of strength being sustained.¹ It does not injure the constitution, for I used it some thirty times and have escaped severe attacks altogether since my return. With it fever is not worse than a cold.

Kongone² 14 Aug. 1861. We expect our steamer every day. A short delay is recommended to the mission until the service

¹ Bishop Mackenzie was wont to chaff Livingstone by saying that the cure was worse than the disease; see below p. 366.

² This paragraph was later cancelled and the postscript substituted.

referred to on page first is finished. I shall not be surprised though we have the company of bishop Mackenzie. Haste will be made to send definite information on several points, now necessarily indefinite, as soon as we return. You will excuse the ramblingness of this letter, I am sure. Praying that you may enjoy Our Heavenly Father's presence and guidance in all your deliberations I am with great cordiality

Affectionately yours

DAVID LIVINGSTONE

P.S. At Kongone, when the very good tidings of the formation of the Oxford and Cambridge Mission arrived in April last year, I at once replied to the Bishop at the Cape, giving what hints occurred to me at the moment. I now find that the Bishop, with his usual wise foresight, had recommended a steamer before my letters had arrived at the Cape. In the case of any mishap to those letters I may add the principal suggestions to you.

Wheaten bread seems essential for the sustention of European strength. It will therefore be advisable to furnish a good supply of fine flour in well soldered tins. It ought to be thoroughly dried, as our English climate permits a quantity of moisture to remain in seeds and meal which a hotter and drier climate makes apparent and decomposition ensues. We lost much flour from some tinman saving a penny per box perhaps in solder. All our provisions supplied by a Mr Wilson of Glasgow were of first-rate quality. I mention names because I found considerable difficulty in getting trustworthy dealers.

We are finishing excellent biscuits of 1858. Good salted pork and beef in small casks, as well as preserved meats in tins, ought to be provided as a stand-by when neither fowls, goats nor game can be had. Abundance of tea, coffee and sugar ought to be bought. Pumpkins, sweet potatoes, cassava—a root resembling a stringy potato—and green maize are often met with. A great deal of animal food is required in this climate, more especially on the march. Much exercise is required and we take meat twice a day.

In clothing but little variation from home customs is required. New-fangled coal-scuttle helmets for the head serve chiefly for frightening away game when you want them to stand. A common blue cloth naval cap is the best head dress, but any one subject to head-aches or determination of blood to the head must avoid exposure to the sun till he is hardened.

Scotch checked Tweed is best of all clothing: if made entirely of wool it is not easily torn by thorns, and when wetted no chill is

experienced. It washes well and in the hot season allows one to dispense with drawers. Loose flannel jackets next the skin and we have found coarse checked shirts, such as sailors use, the most handy. Plenty of thick lamb's wool stockings or socks, or even worsted socks are better than cotton and the shoes ought to be made easy to admit them. Good strong English shoes without nails, high enough on the ankle to keep out grass seeds, which are very numerous and sharp. Those with India rubber spring sides requiring no ties are most convenient. Shoes made of *well waxed* leather and unblackened are good for travelling. A Lamb's hair Karross is very comfortable in travelling: if properly tanned in England they would be much superior to those made by the Dutch. As the work is finer they would not become hard on being wetted. Generally warm clothing is necessary both by night and by day during part of the year. Mackintosh cloaks and leggings are good for travelling in wet weather. These refer, of course, chiefly to the period of travel.

One cannot bathe on account of Alligators. Sponges are the substitute. Any one subject to diarrhoea ought to wear a flannel belt round the stomach with advantage.

Emigration is carried on systematically from New England to Kansas. People of one community go in a body with clergymen, schoolmasters, etc., etc., and settle without half the hardships of solitary emigrants. The best route is found out, interest is paid on the money borrowed to erect a church, a school, a library, a sawmill, etc., until the community can pay off the debt. These emigrants have defeated the attempts of the legislature to introduce slavery into Kansas. If you should apply to the President of Harvard University, Cambridge, Massachussetts, for the rules and regulations of these communities, some reliable hints might be obtained. My brother Charles knows them to have been extremely well conducted.¹

D. LIVINGSTONE

David Livingstone to José Nunes

H.M.S. *Pioneer* 5 February, 1862
IN KONGONE HARBOUR.

MY DEAR JOSÉ,

A brig carrying a new steamer in pieces was towed by me into this harbour and I am fortunate in having the assistance of the Captain and men of H.M.S. *Gorgon* to assist me

¹ This final paragraph is also cancelled.

in unloading and taking her up the river. Mr Rae superintended the building of the vessel at home and is now returned to us. I write to tell you that the Captain of the brig would like a cargo of wood of the sort called at Shupanga Mozimbiti, at Tette Moranyuru, in English and Latin *Lignum Vitae*, and, as your uncle has rented Shupanga, it would be a good opportunity of beginning a trade in wood which would be profitable to you, for should this ship be successful in carrying her cargo home to England, other ships would soon come out here or to Quillimane, as you should like best. I spoke to the Captain and find, though he is anxious to get a cargo, he does not like to take it at his own risk. He would like your uncle to charter his vessel for wood or anything else. Freight is now, he says, £3 per ton. His vessel would take 320 tons and if taken for the voyage, he would expect £1,000 or £1200. I said that then he would bear no risk and all the profits would belong to the man who freighted his vessel. He then said that, should your uncle give him a cargo of Mozimbiti, he would wait here two months from this time, sell the wood and, after paying the expenses of the ship, divide the profits in equal halves between your uncle and himself. This was all said in presence of the Captain of the Gorgon and I write it to enable your uncle to judge, as from his long experience in business he is well qualified to do, whether it will be a good speculation. I think not much profit need be expected from the first cargo, though Mr Rae says that the wood above named and of proper size costs nine pence a pound in England. There is no doubt it would be sold at once and if your uncle should commence the trade, it might turn out a good one for his nephew, for cargoes could be cut and brought down to this or the mouth of the Luabo, or, if it grows up the Panyaze or Quillimane river, it could be taken down there. This seems a good chance to begin a trade and, after telling you about it, I have finished my duty. The rest is according to your uncle's will and pleasure. We had the good fortune to meet him at Shupanga; all our new men said, 'Well, he is a very nice old gentleman'. I was wicked enough to say, 'You must not believe all Portuguese in this country to be like him.'

We hope to start up river in two or three days. Be good enough to write to say to Captain Davies of the Brig, saying whether you will try and give him a cargo. If I were a merchant I would take all the risk just to make a beginning of a new branch of Industry. We come down again from the Shiré in a fortnight or 3 weeks. We leave all the furniture of our new ship here in charge of a man, 'Mosquito',¹ not such a gentleman as your uncle but I have no

¹ = Mesquita.

choice. All our provisions too are left and so are those of the Bishop. One of the Padres remains by them too. We have, I am very happy to tell you, my wife, after about four years' separation, but no children: all are at home for fear of the fever. I hope we shall not need to separate again till death parts us. It is seventeen years since we were married and we have been separated eight of these. My eldest boy is at college, eldest daughter is taller than her mother. In looking at their photographs I feel myself to be a very old man indeed.

We have also the Bishop's sister, Miss Mackenzie and Mrs Burrup, a nice young English girl, and one servant maid and one lady teacher for a school. That is, with Mrs L. who won't take a white servant, five women on board.

That man at Shupanga does not know that the gentleman who rents the prazo is our friend: he gave only a small quantity of mangoes and we bought others from the natives. I feel inclined to go up the trees and take them without his leave this time. We have a large party of sailors and officers going up to help us with the steamer and I must take some mangoes, though your uncle takes me prisoner for it coming down.

I want a large Gundu tree from your estate at Shupanga, the larger the better, as Captain Wilson of H.M.S. Gorgon will take it home, to see if it will serve for shipbuilding. If one, two, or even three good large trees could be brought down to the beach at Shupanga, I will pay all expenses. It is to find out if they are proper for ship building, and I shall ask Mr Vienna for a tree, too, in case your uncle cannot at this time help us. I cut a piece of the Molomburu tree to mend the rudder of this ship and left it on the beach till we come back. I hope it will be left till we come.

Please thank your uncle most kindly for the rice. I did not know it was at Vienna's when I ordered more in my note from Shupanga and I shall land at Vienna's and Shupanga on my way up. The calicoes and other stuffs which your uncle said would be cheaper need not be sent till three weeks or a month from this time. I shall need them, as I got only two bales by the ship. The bishop has five or six but he will need them all to buy provisions for his party. Now here is a letter like a Newspaper for you. I have cleared my conscience: now it is your turn to give me a longer one in return.

Ever yours affectionately

DAVID LIVINGSTONE

David Livingstone to Thomas Maclear

KONGONE, 28 March, 1862

Private.

MY DEAR FRIEND,

I regret exceedingly to have the sad intelligence to communicate that our good bishop died on the 31st January and Mr Burrup about a fortnight afterwards. A new route was deemed necessary, as the Pioneer could not go up to Chibisa's island without remaining there till next flood and we were not sure but that, after we had taken Miss Mackenzie up, we might go to the Rovuma. At any rate we meant to take our goods away from Tette after taking the new arrivals up as far as we could. The bishop wished to come down in November, though the rains had begun, and explore from Ruo upwards; but I pointed out the risk of life to him, with but little effect, I fear, for Burrup had just performed the wonderful feat of coming through all the marshes of the Shiré in a little canoe, but he was prevailed on at last to forgo his exploration and appointed 1st January for our meeting at the Ruo, on our way up. We left on 15th Novr and, going 12 or 13 miles down, were brought to a standstill next day by a sudden fall of the river, and there, with a large marsh on each side of us, we stood more than 6 weeks. Dr Dickson and Clark came past us about 23rd in a covered canoe, and we inferred that the bishop would understand from our detention that we would not keep our appointment. We stood two days wooding, 30th and 31st Decr, one mile above Ruo, and, hearing nothing of the bishop, passed on the 1st January on our way down and were not surprised at not finding him there. It now appears that he came to the appointed place on the 12th and, unlike himself, there remained. He had, subsequently to our parting in Novr, sent Procter and Scudamore to explore, and they were led away Eastward to the Milanje mountains instead of Southwards, to the source, in fact, instead of to the mouth of the Ruo, though before parting with the bishop in July I had pointed out to him to go down Southwards to a mountain called 'Chero', where he would be overlooking the Elephant marsh, and then further south, keeping Mt Clarendon well away on his left. A chief plundered them there, and they escaped barely with their lives. The bishop then went and punished the perpetrator of this outrage, burned his village, and the Makololo who remained at Chibisa's, instead of going home, carried off the goats, etc. He then returned to the mission and with Burrup came down the Shiré in a canoe which was unfortunately upset, and the bedding, clothes

and quinine lost. They were received well by the headman at the Ruo and I believe the bishop, wishing to get into friendly relations with the chief, with a view to future usefulness, remained, took fever, and without quinine, which is essential to the cure, lingered some ten days and died. His loss will be deplored by every one who knew him and, coming as it does on the back of the sad affair at Linyanti, I fear it will prove a sad blow to our hopes for Africa. He died on the 31st, the very day when H.M.S. Gorgon hove in sight, with a brig in tow, having Miss Mackenzie, Mrs Burrup and others on board for the Mission.

Burrup excited all our admiration by his wonderful feat, but we did not then know that it had been accomplished at the expense [of] most of his strength. He was reputed to be by far the strongest man on board the Gorgon before he landed but when we saw him he was but a shadow, thin and wiry but not strong in appearance. He used to say in reference to my travels, 'what one man has done another may.' Pity the strength was not husbanded rather than wasted. The bishop left the mission, after the exposure near Milanje, ill with diarrhoea, yet took a bath in the cold upland waters that night. He did not know what it was to be ill, and thought so little of the fever that he used to joke about the pills being worse than the disease. Burrup went back ill of dysentery and died some four days after his arrival in his chair. Got up early that day, called for and drank 2 cups of coffee, moved about and took breakfast, then was observed sitting in his chair insensible. It is impossible for strong university men to believe that here they are no longer to brave exposure and can no longer bear it. We believe that the same exposure would have killed the bishop and Burrup in England, but we mourn their loss and I feel deeply distressed about it.

I hope a new head will soon be sent out for the mission. Waller shewed an inclination to retire, but was prevented (*entre no[u]s*) by Dr Kirk giving a hint to the Makololo not to paddle him down. Rowley wished him off, as they do not agree well, then gave a note to Captain Wilson for the bishop of the Cape, that the rest were not responsible for any statements Waller might make, but the hint referred to kept him at his post. Rowley said to Kirk and Wilson in hearing of Miss Mackenzie, 'You need not be surprised if some fine day you find us all off from this.' Scudamore, a real brick, replied, 'Never'. Procter has not strength of character, perhaps not the power to bear down difficulties.

When the bishop was gone, instead of sealing up all his papers,

there seems to have been a general rummage and Rowley, who evidently has come out to write a book and not to work as a missionary, actually copied the bishop's will into his journal. All ought to have been sealed up and handed to the Consul.¹ I shall speak about this. He boasts of his wife having got £5 for extracts from his journal in Macmillan's Magazine. This was written before he entered the river. He is perpetually writing, even when the bishop was working on the roofs Rowley sat writing. I am very sorry he has turned thus, but all missions suffer similar disappointments. Ashton and Mackenzie, for instance, dawdle at Kuruman: Mr Moffat could easily do all the work there.²

We sent up supplies with canoes sufficient to enable them³ to go on comfortably. Unfortunately their letters to me indicated starvation. They were opened by Dr Kirk and Captain Wilson, who had taken Miss Mackenzie and Mrs Burrup forward in the gig and when they met the missionaries they were seen to have plenty of tea, coffee and preserved meats, besides as much fresh meat as they could use. The discrepancy was of course remarked on. More provisions—wine, brandy etc., etc.,—will be sent up in canoes ere this reaches you. We are putting the new vessel together at Shupanga: could not get up with a load. I believe our engineer was at fault. We spent all our provisions before we were unloaded, but got sheep, beans, etc, up there and we have biscuit from the brig and other provisions which will carry us on 3 months all right. More will then be ready for us.

We found that it was utterly impossible for us to serve the mission and do our own work. I was willing to do all in my power and am still willing, but with a vessel of this draught we must leave either the one work or the other undone. I hope the friends of the mission will look at this subject in a kindly way.

We have the Revd James Stewart with us. He is from the Free Church of Scotland and is come for information with a view to a mission. I invited him to come and see the people and country for himself and he will go up with us. There is no likelihood of any collision that I can see, the country and people are so enormously large.

¹ That is, of course, Livingstone himself.

² This sentence is a marginal addition, marked to come in here. William Ashton had charge of the printing press at Kuruman and saw Robert Moffat's *Sichuana* version of the Scriptures through the press. John Mackenzie was also at Kuruman before he went to Shoshong. Incidentally Livingstone seems to imply that his father-in-law could carry on the work of the station unaided.

³ The Universities Mission.

2 chronometers are sent down by Mr Keppel of the Gorgon for repairs. I beg to trouble you with them.

Mrs L. joins with me in kindly greetings to you all.

Ever Affectionately

DAVID LIVINGSTONE

Allow me to commend Dr Meller to you. He is a good amiable fellow. He goes down for a change of air. He has a spleen but is not splenetic.¹

David Livingstone to Thomas Maclear

SHUPANGA, 21st June, 1862

MY DEAR FRIEND,

I have been trying to get the geographical position as correctly as possible of the spot where the remains of my much loved one repose by observing Reappearances of the satellites of Jupiter and by taking time by stars, but I fear with less success than I desire. One observation gave me Long. $36^{\circ}!!$ another gave $35^{\circ} 45'$ and another last night between the two. I shall send the observations, but wish to say, when on the subject, that probably Tette, which by the same process I found to be $20'$ wrong, may have been all right. You have never said anything about it. If I can get an occultation by the moon I am sure it will be better, but there are very few available in our parallels.

We never had so much fever and dysentery as we have suffered by our detention in the lowlands. Dr Kirk and C. Livingstone were sent up to Tette to bring away our baggage thence. I had then sole medical charge on board while Mr Stewart attended those left here, and I had on the average a fresh case of fever every day during a month. It was cured quickly but back it came to the same patient repeatedly. Five or seven whites were sometimes down at once. The engineer by whose culpable negligence we have been so long here, escaped the grave by a hairsbreadth. He became jaundiced and had that distressing vomiting which renders remedies of no avail. A blister put on the pit of the stomach to relieve this, filled with serum as dark as black bile and his pulse like a thread ran on like a race horse. I gave a scruple of calomel as a last effort to get the liver to act and happily it did and brought away immense quantities of bile and he was saved, with the inconvenience of being afterwards salinated. This case was identical with that of my poor wife, but she never swallowed the calomel and died jaundiced. We have had no other fatal case, but trying to get rid of the fever

¹ *Marginal addition.*

in the delta is like trying to cure fever in the low overcrowded lodging houses in London or in houses with open cesspools beneath: but we could not leave, and cannot now till we meet a man of war with provisions.

I was slow to believe that the neglected state of the Engines prevented our getting up the Shiré in February; but we spent three weeks in getting up to Shupanga and we have performed the same distance since with heavier loads in three days, or rather in $2\frac{1}{2}$ days' steaming. The Trunnions had not been packed for 20 months and the air pump had of course drawn in air instead of water to the condenser. The plunger of the air pump too had been allowed to work for at least three months with a coating of sand and the air pump cylinder is much worn in consequence. I saw this immediately after the departure of the Gorgon, had it cleaned out and the trunnions repacked and then we went up in less than three days to Shupanga. Mr Rae says he never saw engines in such a deplorable state, but I suppose some of our Cape friends will find out that I alone am to blame, as they did when, after losing the best part of two years' provisions, I allowed the thief whom I twice caught in the act of stealing, to go away unpunished.

The Portuguese have said nothing to us about freeing the captives until lately when the Governor of Tette told Dr Kirk that he had corresponded with his brother, the Governor General of Mosambique, and that *he* was of opinion that as slaving on land was lawful he ought to resist force by force. He was very hospitable and kind but, having the countenance of his big brother now, my opinion that the Portuguese authorities are at the bottom of all the troubles of the missionaries will receive ample confirmation. The Governor General makes all our officers¹ believe that he is very desirous of suppressing the slave trade. No one else gives him credit for anything except receiving bribes and head-money for slaves. The different sums even have been published in a Portuguese paper printed at Bombay! Obviously he never intended that his brother of Tette should let me know that he would connive at any amount of slave hunting his little brother should commit. It is probable that the agents of both brothers are now in the Ajawa camp.

I am sorry that the missionaries turned tail, but under the circumstances it was perhaps as well: they want an energetic head. Mr Procter would make an excellent parish parson, but it is probable that he never anticipated being at the head of a mission. He is a good and sensible man with sufficient firmness, but fighting with the Ajawa put them all in a false position. They, however,

¹ Apparently the British naval officers on the look out for slavers off the East coast.

believe that in so doing they acted rightly, and it is of great importance that their consciences approve of all they did. The good bishop needed some one to lean on. He seemed to have been accustomed to lean on his sisters and it was this that made me favour his plan to have them by him. Miss Mackenzie would have been a great support to him, though she has rather a loose tongue.

Mrs L. left a breakfast service at the Cape, I don't know with whom, but possibly it may be with a Mrs Fletcher. We value it highly as the gift of our late dear friend Major Vardon. I wish it to be sent to our daughter and will feel obliged if you can give me Mrs Fletcher's address.

Thornton is here—has been to Kilimanjaro and thinks the information given by the missionaries Krapf and Rebman quite reliable, despite the faces made by Mr 'Inner Africa laid open.' He saw the snow and felt the cold at about 8,000 feet altitude and 15 miles' distance. The mountain is an old volcano about 21,000 feet high, but he will himself give his experiences.

We launch the Lady of the Lake on 23rd and must go down to the sea again in search of provisions. We have been disappointed by a promise of Captain Oldfield to send a ship between 20 May and 1st June.

DAVID LIVINGSTONE

KONGONE, 25 July, 1862

Private. We shall go to Johanna and probably Rovuma now: Burlton came on a wild-goose chase, as I had told the Foreign Office twice in reference to Bedingfield¹ and May that, if no surveying were to be done for the Portuguese, no naval officer was needed. I have besides a warrant officer acting as Burlton intended to act and am not very anxious for more expense being saddled on the Expedition. I told him fully how I stood and felt, and saw that I would only gain a character for fickleness if I eat in² my former words, though still of the conviction that to take him would only entail fresh annoyances on myself. I advised him to retrace the false step he had taken in coming without an appointment. He insisted that, *because he had come*, I ought to guarantee his expenses from the Foreign Office. I had written declining his services per Gorgon and told Captain Washington that I had done so. He tried a little bullying on Yours Ever

D. LIVINGSTONE

¹ So Livingstone spells it.

² So in the original.

Private and confidential.

I feel somewhat in a difficulty about the mission. Captain Washington tells me that it was never the intention of H.M. Government that I should in my kindness load the Pioneer with the mission goods. This, although only a sort of semi-official observation, means a good deal. I suppose Mr May had informed the Captain about what we did. By waiting for the bishop at Rovuma we failed to ascend very far. This too has been commented on and, though I have heard nothing as yet, I am conscious that the delay with the mission rendered our Nyassa trip, as far as concerned the Rovuma question, fruitless. I tried to square up the provisions expended on our friends during more than three months, but this did not seem to please, as a share of the cabin expenditure was given grudgingly. Indeed we still want 300 lbs of preserved meats and other things.

Again, when we met the mission party at Kongone in February, we took them—four women and one man with between 30 and 40 boxes on board, and all five partook of our cabin fare which at that part of the river was chiefly preserved meats, and sheep at £1 each. I thought that, as we should be but a few days, we could just bear the loss of provisions, as all they had brought were intended for the missionaries; but instead of that we had to keep a portion or all of them over a month and a half. We continued feeding them till every ounce of our flour was expended and every bit of our preserved and salt meats. Our men were put on beans, which caused dysentery. Then, and then only, did we touch the mission stores and took 4 cases of flour, 1 of coffee and 1 of sugar. These were taken by us and by the mission party conjointly. Miss Mackenzie insisted on our taking a small cask of wine for the sick. I consented to do this, as our wine had been used both for quinine and at table for them. On their account too we waited seventeen days at Kongone harbour, and I don't know what excuse to make for that delay in our own work. Revd. J. Stewart pays for his mess with us, but I have heard of some grumbling because of the 4 cases of flour we took when quite out of our own and even when it was shared by¹ the mission party. I scarcely know what to do.

David Livingstone to Roderick Murchison

RIVER ROVUMA, 10th October, 1862

MY DEAR SIR RODERICK,

We have just returned from a month's exploration of the Rovuma river. We turned at Long. 38° 39' E

¹ What follows is added in the margin.

and Lat. $11^{\circ} 13'$ South, so assuming the Longitude of the anchorage to be $40^{\circ} 30'$ E. and Lat. $10^{\circ} 28'$ S. we went about 114 miles as the crow flies from the coast. Adding our Longitude and Latitude together we went 156 miles up the river. It was unusually and excessively low and entailed frequent dragging of the boats at the crossings. When the water split up into three channels the work was grievous; but having chosen the dry season, when we cannot do much in the Zambesi we put 'a stout heart' to a 'stey brae', never stopped except on Sundays and, after fifteen days up and ten down, find ourselves rather tired and brown.

The bed of the river is about $\frac{3}{4}$ of a mile wide. It is flanked by a well wooded tableland which looks like ranges of hills 500 feet high. Sometimes the spurs of the highland came close to the water, but generally there is a mile of level alluvial soil between them and the bank. So few people appeared at first it looked like a 'land to let', but, having walked up to the edge of the plateau, considerable cultivation was met with, though to make a garden a great mass of brush wood must be cleared away. The women and children fled but, calling to a man not to be afraid, he asked if I had any objection to 'liquor' with him, and brought a cup of native beer. There are many new trees on the slopes, plenty of ebony in some places and thickets of bamboos. The whole scenery had a light grey appearance, dotted over with masses of green—trees which precede the others in putting on new foliage: for this may be called our winter and these trees shewed their young leaves brownish red, but soon all will be gloriously green. Further up we came to numerous villages perched on sand banks in the river. They had villages on shore too and plenty of grain stowed away in the woods. They did not fear for their victuals but were afraid of being stolen themselves. We passed through them all right civilly, declining an invitation to land at a village where two human heads had been cut off. A lot of these river pirates then followed us till there was only a narrow passage under a high bank, and then let drive their arrows at us. We stopped and expostulated with them for a long time, then got them to one of the boats and explained how easily we could drive them off with our rifles and revolvers but we wished to be friends and gave about 30 yards of calico in presents in proof of friendship. All this time we were within 40 yards of a lot of them armed with muskets and bows on the high bank. On parting, as we thought, on friendly terms and moving on, we received a volley of musket balls and arrows, four bullet holes being made in my sail; and finding that we, instead of running away, returned the fire, they took to their heels and left the conviction that these are the border ruffians

who at various points present obstacles to African exploration, men stealers in fact who care no more for human life than that respectable party in London who stuffed the Pioneer's life buoys with old straw instead of cork. It was sore against the grain to pay away that calico: it was submitting to be robbed for the sake of peace. It cannot be called 'blackmail', for that implies the rendering of important services by Arabs, nor is it custom dues. It is robbing perpetrated by any one who has a traveller or trader in his power and, when tamely submitted to, increases in amount till wood, water, grass and every conceivable object is made an occasion for a fine. Probably the next English boat will be respected. Beyond these Makonde all were friendly and civil, laying down their arms before they came near us. Much trade is carried on by means of canoes. We had the company of seven of these small craft for three days. They bring rice and grain down to purchase salt. When about 60 miles up, the table land mentioned above retires and we have an immense plain with detached granite rocks and hills dotted over. Some rocks then appear in the river and at last, at our turning point, the bed is all rocky masses, four or five feet high, with the water rushing through by numerous channels. The canoes go through with ease and we might have taken the boats up also, but we were told that further up the channels were much narrower, and there was a high degree of probability that we should get them smashed in coming down.

We were on part of the Slave route from Lake Nyassa to Quilwa (Kilwa), about 30 miles below the station of Ndonge, where that route crosses Rovuma and a little further from the confluence of the Liende which, arising among the hills on the East of the Lake Nyassa, flows into Rovuma. It is said to be very large, with reeds and aquatic plants growing in it, but at this time only ankle deep. It contains no rocks till near its sources on the mountains and, between it and the Lake, the distance is reported to require between two and three days. At the cataracts where we turned there is no rock on the shore as on the Zambesi at Kebrabasa and Murchison's cataracts. The land is perfectly smooth, and as far as we could see, the country presented the same flat appearance, with only a few detached hills. The Tsetse is met with all along the Rovuma and the people have no cattle in consequence. They produce large quantities of oil-yielding seed, as the sussame, or gerzelin, and have hives placed on the trees every few miles. We never saw ebony of equal size to what we met on this river; and as to its navigability, as the mark at which it stands for many months is three feet above what it is now, and it is now said to be a cubit lower than usual, I

have no doubt that a vessel drawing when loaded about 18 inches would run with ease during many months of the year. Should English trade be established on the Lake Nyassa Englishmen will make this their outlet rather than pay dues to the Portuguese.

We return to put our ship on Nyassa by the Shiré, because there we have the friendship of all the people except that of the slave hunters. Formerly we found the Shiré people far more hostile than are the Makonde of Rovuma, but now they have confidence in us and we in them. To leave them now would be to open up the country for the slave hunters to pursue their calling therein—and we should be obliged to go through the whole process of gaining a people's confidence again. It may seem to some persons weak to feel a cord vibrating to the dust of her who rests on the banks of the Zambesi and thinking that the path thereby is consecrated by her remains. We go back to Johanna and Zambesi in a few days. Kind regards to Lady M. and believe me very affectionately yours

DAVID LIVINGSTONE

David Livingstone to Thomas Maclear

ROVUMA, 10th Oct., 1862

MY DEAR FRIEND,

We have been up this river 114 miles as the crow flies but by adding Lat. and Long. together 156. Our turning point was Lat. $11^{\circ} 13' 30''$ S., Long. $38^{\circ} 39'$ E. that is, assuming the anchorage a little south of the mouth to be Long. $40^{\circ} 30'$ E. The water was very very low and many a stiff drag we had in the crossings or when the channel was twice or thrice divided. We had two boats and of course they helped each other and got on merrily. The river is said to be unusually low this year and this is the driest period of the year, but we came to spend the time in which we could not do much up the Shiré in this work and did it. It looks healthy, though we had some touches of fever among us. There are not more than two miles of Mangroves and six miles up the hills begin. Though I call them hills because they look exactly like ranges of hills on each side of the river, on ascending we find them to be but the edge of a thickly wooded table land. Their spurs sometimes come down to the water, but often leave a mile of level alluvial soil between the slopes and the banks. These heights continue over eighty miles, then retire and leave an extended level plain with here and there granitic hills cropping out. Small rocks soon rise in the river's bed and at last its bottom is all rocky, and where we turned the water was divided into numerous channels by blocks of rock

four or five feet high. The banks are still quite level and, with the exception of a few detached hills, were level as far as we could see. We were close to the slave route from Nyassa to Quilwa (Kilwa). About 30 miles above us the Rovuma is joined by the Liende or, as Arabs call it, Niende, which rises in the hills on the East side of Lake Nyassa. Near its junction slave traders cross Rovuma and go ten days in order to reach the Lake whence most of their ware is collected. Rovuma still comes from the west but among rocks where only canoes can pass, and it is asserted to come by a narrow channel out of Nyassa.

There is a good deal of trade up the Rovuma in rice and salt and no difficulty is experienced in getting canoes through where, for fear of getting our boats stove in the descent, we concluded to return. We might, of course, have pushed on, as we could have done before in the Pioneer, but in both cases we should have been jammed much longer than was necessary. Liende was reported to be at this season only ankle deep but very wide. Here there must be two land transports, one at the cataracts where we turned, and where the adjacent land is all level, and one between Liende and the Lake, and the Rovuma will require a vessel, drawing 18 inches only when loaded for trade, during six or eight months in the year. But should English trade flourish on the Lake, Englishmen will prefer a route that does not involve payment of dues to foreigners who have established a 'paper bloc[k]ade' of certain rivers.

I think I have mentioned all the disadvantages of this river (except Tsetse, which abounds) first. One might load a ship with ebony within ten miles of the mouth, which has no bar. Mr Rae never saw its equal for the diameter of the black wood. Then there is the Pangire, a capital wood for shipbuilding and many others which we do not know. Then people cultivate largely of the oil seed called Sessame or Saosame, which is largely exported from Mosambique and Zanzibar to make salad oil in France. They place hives on the trees to secure the honey, but though gum copal was offered and plenty of honey, no wax was seen.

Near the coast the half-caste Arabs engage in slaving. Further up we found a lot of river pirates of the tribe Makonde, living on sand banks for fear of being stolen, and intent on stealing others. Without the smallest reason they commenced shooting at us with arrows. We stood up exposed to their bows and arrows and spent 30 yards of calico in making friends. Glad and thankful at the result, we moved on and received a volley which made four musket holes through our sail, but beyond them we found the people, even of the same tribe, quite friendly. We were not molested at all on

our return. We could soon secure their friendship were we to remain here, as we did on the Shiré, but slave hunters seem really blood thirsty and not much to be trusted.

JOHANNA, 27th Oct, 1862

P.S. We came over to Mohilla in two days and then to this island to coal and provision and ship six oxen for draught purposes at the cataracts. On the 23rd we were delighted by the arrival of our good friends of the Gorgon but had scarcely time to shake hands before they were off again and I have no doubt but their activity in suppressing the stream of slave trade from Nyassa to the Red Sea and Persian Gulph will have an important influence on our labours on the Lake. Meller¹ joined us again, none the worse for his sojourn at the Cape and trip to the capital of Madagascar.

Dr Kirk² I am sorry to say, will soon leave us and I suppose that I shall die in the uplands and somebody else will carry out the plans I have longed to put into practice. I have been thinking a great deal since the departure of my beloved one about the region whither she has gone and imagine, from the manner the bible describes it, we have got too much monkery in our ideas. There will be work there as well as here, and possibly not such a vast difference in our being as is expected—but a short time there will give more insight than a thousand musings. We shall see Him by whose inexpressible love and mercy we get there and all whom we loved and all the loveable. I can sympathize with you now more fully than I did before. I work with as much vigour as I can and mean to do so till the change comes, but the prospect of a home is all dispelled.

We shall sail in a day or two. Thanks for your letter, 31st May, by the Gorgon. I would fain write to Sir George³ but cannot. Well, you give him a note or rather a paragraph in your next concerning our little Rovuma raid, and I shall write him when we get on Lake Nyassa. The Old Traveller watch goes a few hours, then stops, so I left it with Mr Inglis of the Gorgon to go back to

¹ Dr Meller came out in the *Pioneer* as a medical man: he had broken down and sailed to the Cape aboard the *Gorgon* on 4 April, 1862.

² As far back as December 1859 Kirk had had thoughts of returning home when Livingstone was considering his journey to Sekeletu, but in November of 1860, on a direct appeal from Livingstone, he agreed to continue, attracted by the visionary hopes of life on the healthy highlands in association with the station to be established by the Universities Mission. Now, on the way to Johanna, letters from home pressed for his return, but in spite of all, he felt he could not leave Livingstone.

³ Sir George Grey, whose period of office as High Commissioner and Governor of the Cape had ended in August 1861.

hospital, also '3097 R and H Molyneux', a capital chronometer. Something has given way inside. Have you May's Long. of the Rovuma?

Private

By a Despatch of Earl Russell of 2 Aug. last I am told that the letter containing the account of our Nyassa trip was read with great interest and laid before the Queen. Some praise is also given and, better still, the proceedings of the Portuguese caused deep regret and H.M. minister at Lisbon is instructed to make a strong protest against the slave hunting. But I am not to take possession of any discoveries in name of the Government. I hope this may lead to something else more to the purpose. We could get decent men to engage in sugar, coffee and cotton planting on the Lake, but the question rises will titles to land received from Natives be interfered with by Portuguese? You will understand my feelings when I see people up Shiré who were quite as wild as those we have seen up Rovuma, after being made friendly by our patience and kindness, made the victims of slave hunting.

But a Great One rules and there's a good time coming yet.

Good bye

DAVID LIVINGSTONE

Would it be honest to take advantage of the Portuguese Ten Years concession, then, when the dues were about to be levied, say, 'No, thank you. I prefer the Rovuma'?

*David Livingstone to Roderick Murchison*¹

R. ZAMBESI, 14 Decr, 1862

MY DEAR SIR RODERICK,

I have but little to say that will interest you but I don't like to let an opportunity pass without a word or two to you, though I am sorry to find no note whatever from you in the last four mails. We are now in the Zambesi again and it is rising so in a week or so we shall have the Lake steamer in tow and will be engaged in work from which by unlooked-for events we have been too long kept back.

An Englishman led six Scotchmen from London. They are by trade two carpenters, two masons and one smith. They worked at their trade at Aliwal North, Cape Colony, all the wages going to a common fund and with the proceeds they bought two waggons, intending to proceed overland to join me and form a settlement.

¹ 'We cannot come down till January 1864.' Added passage at the top of the page.

The magistrate of Aliwal North who, I am informed by the Colonial Secretary, is a man of sound judgment, brought the case before the Governor and he has consulted with me about sending them by sea instead of overland. The Magistrate mentions that their leader has great influence over them and one was expelled in consequence of breaking their rules. I like the Scotchmen and think them much better adapted for our plans than those on whom the University mission has lighted. If employed as I shall wish them to be in trade and setting an example of industry in cotton or coffee planting, I think they are just the men I need brought to my hand. Don't you think this sensible? Then an idea of the Prince Consort now begins to commend itself—namely, to form stations at different points for the transmission of merchandise: it must be done if we are to be successful at all. One above and one below Murchison's cataracts are indispensable and will be formed while we are carrying the steamer past. Another on the Lake with a farm will be the fulcrum¹ on which we propose to work against the slave trade of 20,000 annually from that region. Pity that she who would have quietly and effectually managed all our domestic affairs is no longer here.

We go back to the Shiré because there we have influence among the people, while in Rovuma it would [be] beginning again at the very bottom of the ladder. Must we knuckle down to the Portuguese, who never have used the mouths of this river, while we use both East Luabo and Kongone? If we must, then all my labours in this quarter will be lost. You cannot conceive the lowness of character of this Portuguese convict population. A few noble exceptions, and even they will not admit their countrymen into their houses. I don't see why lands they never saw and rivers they never use should be deemed theirs; but it seems I am not to proclaim Independent Territories which we discover to be English, though it is only to prevent Portuguese slave hunting.

The Lady Nyassa cost almost £6,000 or just double what I intended. In every other respect she is just what I wanted. The Pioneer draws two feet more than her plan was expected to give. I would have spent the £3,000 and intended to do so without saying a word, and if we succeed in suppressing the slave trade in East Africa at its source, never would money be better spent. The Authorities cannot spend time and thought on such subjects, and giving the order myself was the only way I could secure what was needed for the Lake. If I could only sell Pioneer I would get a vessel from Glasgow for the price that would run on any of these

¹ So in the original.

rivers the whole year. She is an admirable ship, wonderfully well put together, but too too deep. I do not grudge the whole £6,000 for the work, but it takes too much from the children and I think, if the Government thinks it proper to refuse the half after we have her on the Lake, my salary ought to be increased. Burton has £700, one commissioner at Loanda, in the same latitudes as I work in, has £1,000 and the other £1,500, while I, doing ten times more work than any fine commissioner, get £500, the salary of one of the under-clerks of the Foreign Office. It is true I do all *con amore* and will continue so to do.¹ I shall make no whine about it. My children won't stick in the world, and if I lose that £3,000 I shall console myself by remembering that which my valued friend told me about £20,000 he sunk in a Railway which now may be valued at half that sum. When you mention to Lady Murchison how foolish I was to let myself in for £6,000, I hope you will justify me by adding, 'It's as bad as me with that confounded Railway'. With kindest regards to you both, I am

Ever Affectionately

DAVID LIVINGSTONE

Lord Russell to David Livingstone

No. 1.

FOREIGN OFFICE,
February 2, 1863

SIR,

I have received your despatches to No. 5 of the 16th and 21st October last.

Her Majesty's Government fully appreciates the zeal and perseverance with which you have applied yourself to the discharge of the duties entrusted to you. They are aware of the difficulties which you must necessarily have met with and they have deeply regretted that your anxieties have been aggravated by severe domestic affliction.

Her Majesty's Government cannot however conceal from themselves that the results to which they had looked from the expedition under your superintendence have not been realized. Interesting results in a geographical and scientific point of view have undoubtedly been obtained; much light has also been thrown on the natural resources of the newly explored districts; and there is reason to hope that intercourse with the members of the expedition will be productive of good to the native Tribes, by giving them some

¹ *Marginal addition in brackets:* (Lord Malmesbury in a despatch said my salary was too small.)

insight into the doctrines of Christianity, and into the advantages which would result from more frequent intercourse with European nations.

On the other hand Her Majesty's Government regret to observe that there is little to show that the results actually obtained can be made presently serviceable either for the interests of British Commerce or of humanity in general by diverting into a legitimate channel the energies of the native population at present embarked in the Slave Trade.

Whatever may be the natural resources of the newly discovered regions, a point on which Her Majesty's Government have as yet but scanty information, and whatever the extent to which those resources might be developed if frequent and easy intercourse with the interior could be permanently established, it is clear that the route by the Zambesi is one which would be attended with serious if not insuperable difficulties, and Her Majesty's Government learn from your last despatches the failure of your attempt to find an independent route by means of the river Rovuma.

The motives therefore by which Her Majesty's Government were actuated when they consented to extend the period originally proposed for the expedition under your superintendence no longer exist, and whilst a continuance of the heavy charge which it entails on the Public can no longer be justified, it is moreover undesirable to continue to impose on the naval service at the Cape the duty of keeping up a communication attended with serious difficulties and occasionally involving risk to life.

Her Majesty's Government have accordingly decided that the Expedition under your orders shall within as short a period as may be practicable be withdrawn and I lose no time in making you acquainted with their views in this matter in order that you may make the necessary arrangements for this purpose.

I have requested the Lords Commissioners of the Admiralty to cause one of Her Majesty's vessels on the Cape Station to call at the mouth of the Zambesi within three months after the date of your receipt of this despatch. It is not in my power to name an exact date, but I shall be glad to learn that the arrangement can be carried into effect at the end of July. You will avail yourself of this opportunity for the return to the Cape and to England of yourself and the other members of the Expedition. Free passages will be granted to your party: you will notify to the members of the Expedition that their salaries will cease on their reaching this country, and cannot under any circumstances be continued longer than the 31st of December of this year.

If you should however think that advantage would result from your postponing the final withdrawal of your Expedition to a date later than that which I have mentioned, you will at all events send the steamer 'Pioneer' down to the bar while there is water to float her on the upper part of the river, as otherwise that vessel might have to remain until the next season, a delay which would be inconsistent with the views of Her Majesty's Government. Once arrived at the bar the steamer will be held to be at the disposal of the Naval Authorities who will receive instructions on the subject.

There is only one other point to which I consider it necessary to refer on the present occasion, and that relates to the Oxford and Cambridge Mission to Africa.

You are aware that matters of this kind are left by Her Majesty's Government to the energy and zeal of the community at large. The experiment now making is, however, one in which Her Majesty's Government must take a deep interest, and I shall be glad to learn that on the occasion of the withdrawal of your Expedition, you have been enabled to give to any of the gentlemen concerned the benefit of your suggestions and experience with a view to facilitate their labours and to promote the objects which they have in view.

I am, Sir,
Your most obedient
humble servant

RUSSELL

Lord John Russell to David Livingstone

No. 2.

FOREIGN OFFICE,
February 2, 1863

SIR,

In my preceeding despatch I have explained the grounds on which Her Majesty's Government desire that steps should be taken for the withdrawal of the Expedition under your superintendence.

It is probable, however, that a short postponement of that withdrawal may be of advantage to enable you to put in order the results of the geographical knowledge which you have acquired during the Expedition, and Her Majesty's Government who would be unwilling to sacrifice any such result of your labours will instruct the Governor of the Cape to take into his consideration any representations which you may have to make to him on the subject, and to authorise him to decide whether the instructions for the withdrawal of the

Expedition are forthwith to be carried into effect, or whether they may be postponed for a limited period.

If therefore you should have any suggestions to offer on the point you will lose no time in communicating them to Governor Wodehouse and you will be guided by the instructions which you will receive from him.

You will however bear in mind that Her Majesty's Government as at present informed are in favour of the early withdrawal of the Expedition, and you will be careful during the interval required for your communication with Governor Wodehouse not to embark in any further proceedings which could interfere with your ability to carry out your instructions in case the immediate withdrawal of the Expedition should ultimately be determined upon.

I am, Sir,

Your most obedient
humble servant

RUSSELL

David Livingstone to Agnes Livingstone

MOSAMBIQUE, 25 Feby, 1864

MY DARLING NANIE,

When our patience had been well nigh exhausted the river rose and we steamed gladly down the Shiré on 19th of last month. An accident detained us some time but at last on the 1st Feby we were close by Morambala, where the bishop passed a short time before bolting out of the country. I took 2 members of the Mission away in the Pioneer and 13 women and children whom, having liberated, we did not like to leave to become the certain prey of slavers again. The bishop left 25 boys too, and these too I took with me, hoping to get them conveyed to the Cape where, I trust, they may become acquainted with our holy religion. We had thus quite a swarm on board, all very glad to get away from a land of slaves. There were many more liberated, but we took only the helpless and those very anxious to be free and with English people. Those who could cultivate the soil were encouraged to do so and left up the river. Only one boy was unwilling to go and he was taken by the bishop, who seems no more fit to be a missionary than I am to be captain of a Man of War. We find that he never intended to settle down as a messenger of mercy, for he told the officers of the ship by which he came that he would only go in, wind up the affairs of the mission and retire. It is a great pity, for he had a noble chance of doing great things. The captives

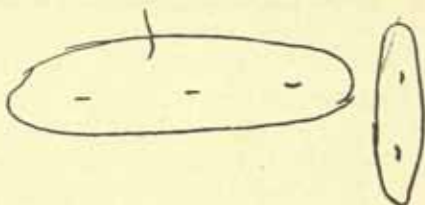
Blacksmith at work



would have formed a fine school and, as they had no parents, he could have educated them as he liked.

When we reached the sea coast at Luabo, we met a Man of War, H.M.S. Orestes. I went out to her with Pioneer and left Lady Nyassa round by the inland canal to Kongone. Next day I went in to the Kongone in Pioneer, took our things out of her¹, and handed her over to the officers of the Orestes. Then H.M.S. Ariel came and took Nyassa in tow, Orestes having Pioneer. Capt'n Chapman of Ariel very kindly invited me on board to save me from the knocking about of the L. Nyassa, but I did not like to leave so long as there was any danger, and accepted his invitation for Mr Waller, who was so dreadfully seasick and woe-begone I could not look at him without laughing.

On 15th we were caught by a hurricane which whirled the Ariel right round. Her sails, quickly put to rights, were again backed, so as the ship was driven backwards and a hawser wound itself round her screw, so as to stop the engines. By this time she was turned so as to be looking right across Lady Nyassa, and the wind alone propelling her as if to go over the little vessel. I saw no hope of escape except by catching a rope's end of the big ship as she passed over us, but by God's goodness she glided past and we felt free to breathe. That night it blew a furious gale. The Captain offered to lower a boat if I would come to the Ariel, but it would have endangered all in the boat. The waves dashed so hard against the sides of the vessels it might have been swamped, and my going away would have taken heart out of those that remained. We then passed a dreadful night, but the Lady Nyassa did wonderfully well, rising like a little duck over the foaming billow. She took in spray alone and no green water. The man of war's people expected that she would go down and it was wonderful to see how well she did when the big man of war, only 200 feet off, plunged so as to shew a large portion of copper on her bottom, [and] then down behind, so as to have the sea level with the top of her bulwarks. A boat hung at that level was smashed. If she had gone down we could not have helped in the least: pitch dark and wind whistling above. The black folks, 'ane bocking here², anither there', and wanting us to go to the 'bank'. On 18th the weather moderated and, the Captain repeating his very kind offer, I went on



¹ *I.e.* the *Pioneer*.

² *I.e.* vomiting.

board with a good conscience and even then the boat got damaged. I was hoisted up in it and got rested in what was quite a steady ship as compared with the *Lady Nyassa*. The *Ariel* was three days cutting off the hawser, though nine feet under water, the men diving and cutting it with immensely long chizels. On the 19th we spoke to a Liverpool ship, requesting the Captain to report me alive, a silly report having been circulated by the Portuguese that I had been killed at Lake Nyassa; and on the 24th we entered Mosambique harbour, very thankful for our kind and merciful preservation. The *Orestes* has not arrived with the *Pioneer*, though she is a much more powerful vessel than the *Ariel*. Here we have a fort built in 1500 and said to be of stones brought from Lisbon. It is a square massive looking structure. The town adjacent is Arab in appearance, the houses flat roofed and coloured white, pink and yellow; streets narrow, with plenty of slaves on them. It is on an island, the main land on the North being about a mile. We are waiting for the *Orestes* and will then go on to Johanna, Zanzibar, etc. I send this by a Portuguese man of war steamer going down to the Cape.

Robert has gone with a merchant ship as a common sailor where generally the men are much worse treated and are less taken care of than in men of war. He was not doing well otherwise, but, as one sows, so he shall reap. He has not written to me at all.

I hope to be home about July next, possibly earlier, but I don't know. The monsoon suits for going to India from Zanzibar after 24th March, both wind and current being in our favour. In coming up here we had 52 miles of current daily against us, i.e. we were carried back about 2 miles every hour while sailing about four forwards and, if we counted only what we sailed over, we should be 104 miles on our course instead of only 52. To-day we have a gale blowing outside while we are snug by the Fort. The Governor General is ill and going to the Cape for health. I fear like many he may not enjoy the gains gotten by the slave trade. It is a common saying in this country that slave money is bad money and never enjoyed by those who acquire it. Their observation confirms the saying of Solomon that he who gets riches not by right shall leave them in the midst of his days and in the end be a fool.



I took several leaves from the Baobab tree by which the remains of your dear Mama lie. They are what is called palmated, thus, but have all separated from the stalk or peticle, so you will have to put them together with a little gum.

Let Oswell and Tom know the contents of this at your convenience. I have written to them by packet which is addressed to Hamilton. My love to Anna Mary and all the rest.

Believe me ever your with great affection

DAVID LIVINGSTONE

Please present my kind compts to Miss Eisdell and say that while very thankful for her kind offer, she must charge the same for you as for her other pupils.

D.L.

David Livingstone to Thomas Maclear

NEAR ADEN, 5th July, 1864

MY DEAR FRIEND,

We left Mosambique on 16th April and made Zanzibar on 24th; then spent forty four days between that and Bombay, of which $24\frac{1}{2}$ were dead calm. We could not steam much, as we had but fourteen tons of coals and we burn three tons in 24 hours. I had moreover but one stoker to manage the engines and could not work him more than 10 hours at a time. About half the coals were used to steam out from the land, the other when we reached the coast of India. We went, dhow fashion, along the East coast of Africa, for being, as you know, of a conservative turn of mind, the route followed since the dhows of King Solomon ran ashore must surely be the right one. We had a current of one hundred miles a day, North, at least, when within 30 miles of the land, and with it we soon crossed the Line. Maury puts the calm belt there from the Equator to 10° South, so we thought we were safe, but soon were taught the lesson not to be too clever. From Ras Awath we steamed out and got becalmed in, I believe, the very belt that ought to have been a long way south. Instead of an 100 miles North we had now 4' South daily: steamed a little occasionally—to condense water—then ultimately got a stiff breeze and by patience and perseverance and a good Providence watching over us, we finished our 2500 miles without seeing a single vessel. Our intense insignificance was amusing. A dense haze obscured all the land, but we had made out our position as a little South of the light ship, steered for it, and found it. Then for Bombay and soon saw the big forests of masts through the haze. Went up, modestly of course, and anchored alongside the outer ones. Nobody saw us, and no wonder; such a mass of shipping lay in the noble bay: we were but an atom. No pilot offered his services

and it was only on the second day after our arrival that the custom house officer came aboard.

To walk among the teeming thousands of all classes of population and see so many things that reading and pictures had [made] familiar to the mind was very interesting. The herds of the buffaloes, kept, I believe for their milk, invariably made the question glance across the mind, 'Where is your rifle?' The horns of many are very like our wild ones, nor could I look at the elephants either, without something of the same feeling, though they had Mahouts ('leaders' our Capenaars should call them) on their necks. Hundreds of bales of cotton were lying on the wharves, the sparrows building their nests with it and goats using the liberties which 'bocks' are prone to use thereon. We saw scores of bullock carts coming down country outspanned, and the cotton exposed to the drenching rains. This last, however, belongs to native owners and over it merchants have no control. By speculation in this precious article I hear that many have made fortunes, and some have lost them.

Private. When discovered, I found that many had been on the look out for us: perhaps Welsh coal with no smoke favoured our concealment. The Governor, Sir Bartle Frere, sent a very kind invitation to spend some time with him and Lady Frere at Dapoore, 146 miles or 6 hours by railway up country. It is above a ghaut or highland identical with that of Lake Nyassa, but not so high. The air is cool up there and the country identical with that North of Magaliesberg. Fancy 250 inches of rain falling annually on the face and crest of this ghaut and only 50 at Poonah and Dapoore! Bombay is low and steamy, the nights are like those of the East of Murchison cataracts, but not quite so cool or so luxuriant. All who could afford it went up out of the heat of Bombay, and my little experience at Government house would say that they shewed great good sense. The troops too are moved, so as to ensure both health and pleasure.

The Governor is an exceedingly good man and his lady no less as a lady. Fancy, if you can, an improved edition of our friend Sir George Grey. Well, I came to Bombay to sell Lady Nyassa. 'Oh man of feeble mind!' you may say, for with the sale, which many seemed ready to effect, came the idea most vividly, 'You thereby give up future work in Africa,' and I could not do it. By Tozer's dastardly retreat, decided upon before he had landed, all our work up Shiré is cast away. I must therefore do what I can to get an English settlement away from the Portuguese. Bombay merchants profess willingness to try, if a feasible spot can be pointed out. I therefore resolved to run home by this mail of 24th

June and consult with friends and, if matters can be made favourable, I shall be out again in 4 months to go up and examine Juba and other two rivers near. One entrance is, I believe, Fort Dromfort. I could not go as I came up, as I had but three white men aboard and Gardner did not act as fairly as he might have done and extracted a promise from me in writing to pay the men's wages who, having been with me for years, volunteered to see me safe to Bombay. I strove to avoid a quarrel, but he was decidedly impudent and bullying. I ran a risk, as the violent monsoon was expected to begin from 4th to 12th of June. I entered Bombay on the 13th, and sometimes thought, as the enormous waves of the Indian Ocean thumped our stern and made her all quiver, that 'left Zanzibar on 30 May and was never more heard of' would be my motto. Rae left us out of sheer terror, but ostensibly for a situation on Sunley's plantation. 'He would not go, if he got the vessel for going', he said. One of the chronometers behaved like a gentleman, Dent 1800.

The Governor is most favourable, so, please God, we shall try again. We are near Aden and so, with greetings to all at the Observatory,

I am, etc.

DAVID LIVINGSTONE

No. 9. THE TOWN OF SESHEKE IN THE MAKOLOLO COUNTRY
SOUTH CENTRAL AFRICA

6 *Sepr*, 1860

The Right Honourable Lord John Russell.

MY LORD

The return of the Makololo from Tette to their own country by a march on foot of more than six hundred miles was accomplished during the three months between 16th May and 16th August last. We have thereby kept faith with that people and their chief Sekeletu, and in addition have examined most of the river above the rapids of Kebrabasa at low water, entered into amicable relations with the people on its banks without submitting to the exorbitant and degrading 'payments for leave to pass' to which the Portuguese are subjected at every village; ascertained that the coal field extends not only to Zumbo, as I formerly pointed out, but nearly to the Victoria Falls; found cotton cultivated largely which, according to Mr C. Livingstone, resembles closely a superior South American species and decidedly of better quality than that of the foreign seed which we had to distribute and, after breathing

for a short time the clean cold air of the Highlands, where we actually saw hoar-frost and a little ice, descended into the great central valley and delivered the letter of H.M. Government to Sekeletu, the chief of the country.

At the very time we were wending our way up the river, a party of English missionaries came to Linyanti, Sekeletu's capital, and in less than three months six out of nine Europeans were cut off by fever. Four native attendants also perished. The survivors had fled before our arrival. At a lower and much worse part of the country severe attacks of the disease in my companions, Dr Kirk and Mr C. Livingstone, never interrupted our march more than a day or two. A man was sometimes stricken prostrate, and resumed his march on foot the day after the operation of a remedy which I first employed in the cure of my own children and an English party at Lake Ngami in 1850, and subsequently used in curing myself and companions during my long journey across the continent. Aware how often men have deceived themselves with medicines which are now known to be quite inert, I did not feel confident of success with Europeans generally till the ample experience of this Expedition demonstrated the efficacy of the remedy. The unhappy fate of this missionary party shews that the fever is as potent now as when the officers of Commodore Owen perished on the Zambesi and the crews of the Great Niger Expedn were cut off in that river, and urges me to bring the composition of the medicine formally¹ before your Lordship, and probably it may be of use in saving life on the West coast where, in the wood and Palm oil trade, hundreds of English subjects are annually cut off by African fever.

In noticing the points of most interest in this land journey, the very deleterious effects of contact with slavery must not be omitted. The Makololo had been four years among slaves and many had formed connections with slave women and had children by them. As the party consisted almost entirely of people conquered by the Makololo, it was to be expected that some would prefer remaining at Tette to returning to their own country where, though not slaves, they are looked upon as an inferior class. In their mode of separating from us it soon became painfully apparent that they had imbibed largely of the slave spirit. In the Interior I have rarely had to regret trusting to the honour of the natives, but here, though it was publicly proclaimed three times that any one wishing to remain at Tette was at perfect liberty to do so, and it was hoped that no one would carry our goods a few days' distance and, by returning, entail upon us loss and difficulty, all expressed the

¹ *Marginal note:* Enclosure A.

greatest eagerness to return to Sekeletu; but every night one or two ran away, as if they had been slaves. They would not make their intentions known, and it was very annoying to have to appear as if using compulsion when perfectly willing that each should follow his own choice. About twenty, or one fourth of the party, left us either by running away or shamming sickness. This is nearly the same proportion of fugitives as occurs in the experience of Portuguese traders and their slaves.

Taking an enlarged view of the slave question, it would seem that sufficient prominence has not been given to the deteriorating influences of the system, and that no opposition ought to be offered to our countrymen in the importation of really free labour, where the population has once been the victims of slavery. Most fortunately the English possessions have been rid of the blight, but they have not shaken off the deleterious effects it left behind. Opposition to attempting this by the introduction of a free element from other lands, if successful, would only enhance the value of slave labour elsewhere. The only ground on which really free emigration could be denied is the pretext that it might afford to other nations to engage in a system which, so long as Africa remains unenlightened, must be the slave trade. Frequent visits to the low swampy districts on the coast have produced the conviction that no engagement could be made with the people there. In passing, for instance, along the creek and branches of the Mangrove swamps of the Delta of the Zambesi, canoes were often seen but, when approached, the natives uniformly fled into the dense recesses of the Mangrove thickets where, at every step, they sink ankle-deep in tenacious mud which, except when covered with the tide, emits most offensive effluvia. We treated all who ventured near our station on the Kongone with more than ordinary kindness but never gained their confidence and lately, during a visit of twenty-three days, not one came near our camp. When certain headmen engage to furnish labourers they are furnished by regular slave hunting, in which the half-caste Portuguese play the most conspicuous part.

We travelled along the North bank of the Zambesi, crossing in our course the mountain mass in which Kebrabasa rapids are situated. The cataract Morumbua is the only serious difficulty in their navigation, and it could be passed by a powerful steamer at the period of full flood. At Chicova a dyke of basalt stretches across the stream at an acute angle with its course, exactly like an artificial dam, but there are two openings in it of from twenty-five to thirty yards wide, and deep enough to allow the whole body of water to pass in the dry season. The rapids of Kansalo and Kariba, about

30 miles above the confluence of Kafue, are of the same nature as that at Chicova and canoes are said to pass with ease, but we mean to purchase canoes at Sinamani's and drop down stream, so that nothing shall escape our notice. The part of the Zambesi which in 1855 I did not see except in the distance and extending from the Kafue to the Victoria falls, flows gently in a well cultivated densely peopled plain. The ranges of mountains are not so near the river as they seem from the Highlands on the West. It is much narrower than below Kafue, 300 or 400 [yards] only, but deep enough even at low water for a small steamer to ply constantly.

If we divide the Zambesi into three reaches, namely, from the sea to Kebrabasa, from Kebrabasa to Kansalo and thence to Victoria Falls, we find that each reach is abundantly supplied with coal. Your Lordship's attention has already been directed to the coalfield at Tette. In addition to a former discovery of coal on the South bank above Chicova we now discovered the mineral in two rivulets on the North bank. Blocks of it a foot or more square lay in a stream called Sinjere and, curiously enough, the natives did not know that it would burn. The same coal field extends, with occasional faults from the bursting through of igneous rocks, nearly to the Victoria Falls, and the quality is better even than that of Tette. It resembles closely English domestic coal, for it froths like toasting cheese in an open fire. This vast coalfield will possibly modify the calculations of the Philosophers as to the amount of mineral in the world, and it may constitute an important element in the future greatness of the Cape Colony.

The people inhabiting the valley of the Zambesi above the confluence of the Kafue are chiefly Balenye and Bame, but they are much mixed with other tribes. They all cultivate the soil and raise large quantities of grain. A considerable amount of remarkably fine cotton is also planted, yet a large number of the men go stark naked. They are not inferior in any respect to natives who clothe themselves. The women are all decently covered, but these 'Baenda pezi' or 'Go nakeds', as they are termed, seem absolutely devoid of shame. Their tobacco pipes are elaborately ornamented with iron and copper, and they are sufficiently conceited in the fashion of their hair and the colour of the beads around their necks; but though they deny the existence of any law on the subject except 'custom', neither laughing nor joking could arouse the sense of decency. What was of more importance, they were very hospitable and accompanied us for days together, carrying the burdens of our men for very small payments.

On reaching Lat. 17° 18' S., we turned Westward towards the

mountain called Tabacheu, ascended about 2,000 feet above the valley of the Zambesi, or 3,300 above the level of the sea, with the intention of crossing the Highlands of the Batoka country and shaping a pretty straight course to Sesheke. The clear cold air of the highlands revived our spirits and, though we saw hoar frost in the valleys and a little ice in shallow water, it is probable that the ground never freezes so as to destroy the roots of Tropical plants. It is to a part of this elevated region that the Makololo wish to remove, and here Europeans would probably enjoy immunity from fever. When we came to a point about twenty miles North of the Victoria falls we could see the 'smoke' distinctly with the naked eye, and I could not resist the pleasure of shewing the wonderful scene to my companions, though by going down to it we added some forty miles to our tramp. The river was now very low and there was no danger in passing down to the island in the middle of the river and lip of the fissure into which it falls. After a second visit I think the scene the most remarkable in the world, and none but an artist in oil colours could convey a true idea. The water being very low we could see that the part of the crack into which the Zambesi rolls is of the shape of the letter L. There is another fall below this called Moamba,¹ which we hope to examine as we return.

We found Sekeletu labouring under a skin disease which was believed to be Leprosy, the effect of Witchcraft, and several of his principal men had suffered death for the crime. Dr Kirk and I undertook the cure and he is now nearly well. Compelled to live in the swamps of Linyanti, from fear of their great enemy Mosilikatse, the true Makololo are perishing. The black tribes whom they have subjected to their rule preponderate greatly, and unless they can remove soon to the healthy highlands in the North East, the nation will break up. The Revd R. Moffat having long been the friend of Mosilikatse, it is universally believed that the presence of any member of his family would secure the Makololo from war. Had his daughter Mrs. L. come, they would at once have removed to a country where both cotton and sugar grow luxuriantly. She travelled overland a thousand miles from the Cape to join me here but, hearing that it was impossible for us to ascend in the small and weak steamer at our command, she returned at great expense to Cape Town.²

It is this failure that induces Sekeletu in his letter to ask the chief of the English to send some of her people to live with him. On hinting that feuds might arise between his people and English

¹ Now the Chimamba Rapids.

² A strange refraction of the truth.

settlers, he replied, ' These would be domestic matters only '. The country referred to is the finest and most healthy in this region, but nearly uninhabited on account of being open and defenceless. In taking down Sekeletu's answer to the letter of H.M. Government I carefully abstained from making any suggestion and allowed him first to say what was uppermost in his mind at the time. The letter was read at a public meeting of the people, and the answer may be considered as an expression of the wishes of all the intelligent men of the tribe. The translation is as literal as the idiom will allow.

The Makololo eagerly availed themselves of the opening for commerce made to the West coast in 1855, but an Arab from Zanzibar, to whose guidance the first party was entrusted, has probably played falsely, for not one of the ninety-five persons composing it has ever returned. Notwithstanding this, other trading parties have been sent since, and we found one detachment of Makololo just returned from Banguela with goods bought with ivory.

I have not discovered that the law promulgated by Sekeletu five years ago against selling children and others to half-caste slave traders has been publicly broken but, among such a mixed population as the Makololo subject tribes, some of whom live 200 or 300 miles from the capital, I suspect secret transactions may have taken place in violation thereof. The real Makololo are intelligent and enterprising; they would soon learn to cultivate and collect the raw materials of commerce, were we once able to set them an example.

The party which now returns to Tette with us, consisting of sixteen persons, are instructed by their chief to lead us—in the event of our being able to bring up our goods at once—to the healthy Highlands. Sickness alone prevents Sekeletu from accompanying us part of the way to select a proper locality for the whole tribe. He is afraid that, should he appear abroad before his entire complete cure, the wizzards who inflicted the disease might destroy the good effects of our remedies.

I am, etc.,

DAVID LIVINGSTONE
H.M. Consul

P.S. The despatches Nos 12 and 13 of 1858 and No. 5 of 1859 were found by me at Linyanti a few days ago.

The greatest obstacle to the establishment of a regular Post from this to the Cape overland exists in Sir George Cathcart's Treaty with the Transvaal Boers. This prevents English intercourse, stops English trade to the Interior, and drives the Makololo to the

West coast, though they possess a decided preference for the English.

Inclosure 1 in Desp. 9.

In adopting the somewhat unusual course of bringing a medical subject before your Lordship, I am influenced by the persuasion that no work of humanity is deemed beneath your notice, and the melancholy loss of the missionaries at Linyanti urges me to make the remedy for African fever as widely known as possible. On visiting Linyanti a few days ago in search of medicines for the disease of Sekeletu, I found the proper medicines for the composition of the fever powder in a waggon carefully guarded for me during the last seven years, and that within a few hundred yards of the spot where these good people helplessly perished. No secret has ever been made of the medicine during the few years in which I have tested its efficacy, but, remembering how often a medicine has been proved serviceable in one hand and useless in another, I have always spoken of it with diffidence. I do not claim any merit except that of doing, after much study and research on fever, what anyone might have done who was anxious to overcome the great barrier to intercourse with Africa.

Without entering into details of the typical cures given in the medical history of the Gt Niger Expedition and elsewhere, the Niger Expedition shewed in every fatal case a gall bladder distended with black bile of the consistency of tar. The remedy, which consists of common medicines, administered without what has always been considered necessary preliminary measures, relieves in the course of five or six hours the violent symptoms, caused probably by the retained bile, without loss of strength to the patient, and Quinine completes the cure.

D. LIVINGSTONE

Composition of Fever Powder

Resin of Jalap and Calomel, of each eight grains. Rhubarb and Quinine of each 4 grs. Mix well together and, when required, make into Pills with Spirit of Cardamoms.

Dose: From Ten to Twenty grains and, after five or six hours, Quinine in four grain doses till the peculiar effects of this remedy appear.

Should this remedy prove as useful on the West as Dr Kirk and I have found it on the East Coast, it may be well to have it on record that the saving of human life thereby was by one of H. Majesty's servants connected with the Foreign Office.

Inclosure 3.

Abduction of a party of Makololo by an Arab of Zanzibar.

On my return from Loanda on the West Coast to Linyanti in September 1855, the Makololo were so delighted with the prospect of direct trade with the white people that a fresh party, consisting of ninety-five individuals, was instantly despatched with forty elephants' tusks to commence the trade for which an opening had been made. Sekeletu, not suspecting any unfair play, accepted the guidance of an Arab from Zanzibar called Ben Habib ben Salem Laffi, with a view to allow the party which had accompanied me time to rest till the fresh party should return. In December of that same year information was received in England from H.M. Commissioner, E. Gabriel Esq., that the party had arrived at that capital but the Arab had sold the ivory before reaching it, and had forced the Makololo to carry it thither. He seemed anxious to prevent the Makololo becoming acquainted with Mr Gabriel, to whom Sekeletu had given them directions to go. Mr G. treated them with his usual kindness and they took leave of him, as they believed, to return to Sekeletu. They have now been away five years and a vague report has reached this that Ben Habib now occupies his father's place as headman of an Arab village near or in Zanzibar, but none of the Makololo live with him. He had probably wheedled the party over to the country where his countrymen are in power with a promise of finding horses for Sekeletu, and there overpowered and sold the whole into slavery. I subjoin the names of the principal men of the party, in order that enquiry may be made by H.M. Consul at Zanzibar. For though there is scarcely any probability that this theft and villainy will be brought to justice, the recovery of only one intelligent member of the party by an English officer would tend in no small degree to spread the good name of our nation throughout this region. The propriety of any steps being taken is respectfully submitted to your Lordship's judgment.

D. LIVINGSTONE

Names:

Putonono = a true Makololo and head of the whole party of ninety-five.

Namabande

Mpele

Molele

Kialola

Seakuala

Sealokone

Headmen of smaller divisions of the party and of various subject tribes.

Inclosure 2. Despatch 9.

Sekeletu's Answer.

Go itumetse Sekeletu mahuku a lokualo lo lo thileñ, nu Naga e mo paletse ka go tsabana le Mosilikatse—Oa bona botluku yo vegolu kua o tefi—go hela bathu—go hela likhomia a ga si botluku yona bo—Naga ki eoana ea Bhoru li ea Mpakane ki nago e emtle kua bathu ba ka agela ruri—Mi nka aga yau ki le nosi Ha ki aga ki le nosi le go ro bala gankitle ki [? robala] go eona. Ha MaRobert o kabo o tlele ki gona nka itumelañ, gobane Mosilikatse o ka mo lesa, le roua, ka e le nuana oa Molekane oa gae—Mosheta—Mi Sekeletu oa re go Morena oa Makoa, Mpa bana va gago go aga le na mi ki tla ba khao—Ganan naga va ka aga mo go eona.

Tsela kua Bophirimo yoa Letsatsi ka yenu Monare o e phuntse mi tsela kua bophirimo yoa letsatse oa e plunya Le Ena Morena la tusa Sekeletu ka go roma Mokhoru oa tsepé—A ga o ka tlaolela bana ba gae go aga le ena ba bua taba le ena yale tsela e phimyegele rure—Ki gona go robala ga mothu Naga e ae e gopolan ki a maloba mi lichaba tsa Batoka ha a loga—ki naga ea mechoeri—Banagoa le bona ba yala Maloba ba a roka.

A go ba tsalano le bona ka metla ka melta—re utluane monate.

Go bua () Sekeletu

His finger mark.

SESHEKE 9th Sept. 1860.

In presence of Mamire, His finger () mark.

Witnesses:

D. LIVINGSTONE.

J. KIRK.

Translation

of the message of Sekeletu in answer to the letter from the English Government signed by the Earl of Clarendon

Sekeletu rejoices at the words of the letter that has arrived, but the country has disabled him while fleeing from Mosilikatse. He finds great affliction where he is. People perish, cattle perish. Is that not a great affliction! The country (called) Phori and Mpakane (Highlands near the river Kafue) is beautiful, and people might dwell there properly, but how can I live alone? If I lived alone I should not even sleep in it. Had (Mrs L.) MaRobert come, then I should have rejoiced, because Mosilikatse would let her alone, and

us, she being a child of his friend Moshete (Moffat). And Sekeletu says to the Lord of the English, Give me of your people to dwell with me, and I shall cut off a country for them to dwell in.

A path towards the sunsetting has already been burst open by Monare (Dr L.) and a path towards the rising sun he is now bursting open, and the Lord (Queen) assisted Sekeletu by sending the iron ship. Will she not single out some of her people to live with him and hold intercourse? Thus the path would be burst open permanently. Then would there be sleep (or prosperity) to man.

The country of which we think is one of cottons and the Batoka tribes weave it. Subject tribes and the Banajoa also sow cotton and use it.

Let there be friendship with him (Sekeletu) for ever so that we may mutually feel pleasure.

So speaks Sekeletu.

SESHEKE 9th Sept 1860.

Signed in the Egyptian way with the finger dipped in ink by Sekeletu and his stepfather Mamire, the next in authority to himself in the tribe.

Witnesses:

D. LIVINGSTONE.

JOHN KIRK

No. 10.

TETTE, 24 Novr, 1860

The Right Honble
Lord John Russell.

MY LORD

The Elephant hunters whom we expected should take the despatch No. 9 overland to the Cape, had left Victoria Falls before our return from Sesheke. It will therefore accompany this down the Zambesi. The River having been about two feet lower than we ever saw it, we were able to see one half of the crack which forms the falls of Victoria distinctly to the bottom. The depth down to which the river leaps without a break is not one hundred feet, as was formerly conjectured, but three hundred and ten feet, or, if I remember rightly, double the depth of Niagara. And the breadth, instead of one thousand yards, as was formerly stated, is between one statute and one geographical mile. We say 1860 yards by way of assisting the memory, though it is a little more. The lips of the crack at Garden island in the middle of the falls are

probably more than eighty feet apart, though the sextant gave that result, for no one could throw a stone across.

The existence of the most remarkable waterfall in the world, in a country which was conjectured by speculative geographers to be interminable sandy plains into which rivers ran and were lost, induces one to ask your Lordship to glance at the sketch given in my book. This gives a pretty fair idea of the scene in flood-time as seen from a point above the falls Westward; but when we come to the other or Eastern side of the columns of vapour, from which the native name 'smoke sounding' is derived, we find the sight still more strange. The crack is prolonged in a wonder[ful] zigzag manner. The promontories formed by the zigzag fizzle are of the same level as the bed of the river above the falls. Their tops are flat and so narrow that a few paces enable one to see the whole river on each side of him, 300 or 400 feet below, jammed in a space of 20 or 30 yards. Like the ledge over which the river rolls at the falls the sides of the promontories are nearly quite perpendicular, shewing that the formation of the crack is of a comparatively modern geol[ogica]l date. The river runs in the crack some 30 or 40 miles. On our way down we visited it twice in this space and saw the fall Mōmba or Moamba, but it is nothing after those of Victoria. The total descent made by the Zambesi between the great falls and Sinamane's, where it is smooth again, as found by the boiling point of water, is 1600 ft.

Sekeletu sent a party of people to build a stockade on an island on the lip of the falls where the fruit trees planted in 1855 had all been devoured by Hippopotami: it is hoped that this will protect those planted now, while the condensed vapour from the columns wafted over the island will save them from perishing by drought.

Another party convoyed us down to Sinamane's and, had it not been for the honour intended to be done to us by the chief, we should have been better without them. The Makololo subject tribes are so accustomed to plundering in their expeditions that we had to keep a sharp look-out to prevent them from stealing while in our company, and we had to warn the people of every village that we had a lot of thieves with us.

Had we not resolved to endeavour to be at the sea-coast by the end of November, we might have visited Mosilikatse and made further arrangements about our overland post. The hot season had set in besides, and our sensations had made it questionable if Europeans could do much more than we had done. The temperature of the soil in the sun rose to 137° , and a thermometer held in the shade of the body in marching shewed 102° – 104° . The blood

even became a degree and a half hotter than that of the natives, or 99.5. We were therefore very glad to get into the canoes which we purchased from various headmen on the river. These vessels are so small that a little wind is dangerous, and so is the ripple of a rapid. On one occasion they were suddenly filled, but the men behaved admirably by leaping out and swimming alongside till we came into smooth water. At another point the men of the first canoe, having passed a dangerous eddy safely, looked back to the second and third canoes drifting into it, exclaiming 'Look where these people are going!' and were themselves swept against a rock and upset. By this accident we unfortunately lost the chronometer Dent 1960, and Aneroid Barometer, a rifle and Revolver and some private property. The water some fifteen fathoms deep and a rapid current rendered it quite impossible to recover anything.¹

In our voyage down we gleaned the following points respecting the river itself. From the point where we embarked (Sinamane's) to Kansalo, the river is far more navigable than between Tette and Senna, though it is only 300 or 400 yards broad, or like the Thames at London bridge. It is deep and flows gently. A little below Kansalo at Kariba there is a basaltic dyke stretched across the stream like an artificial dam, but it has a wide opening in it, dangerous only for canoes. The river is then narrow and deep flowing for several miles through a range of lofty mountains. Still further down at Mburuma's there is a rapid of about 100 yards in length where the current is nearly six knots an hour. This is the most rapid part of

¹ The exciting account of this dangerous episode from Kirk's diary is given at length in Coupland's *Kirk on the Zambesi*, pp. 177-9. 'We could go through it [the rapid] easily, but at this time we saw Dr L's canoe carried up to the rock. Every second we expected to see it upset and all in the boiling water. To make things worse Mr C. L's canoe was running as if into them; both would be upset. The only hope was from us. We all looked. Had we paddled on we could have saved ourselves easily, but had the others capsized there was no hope of saving them, for the water boiled up and curved in eddies so that no man could survive. We lost a few strokes of the paddles while thus looking at the almost inevitable destruction of the others'. Kirk continues, 'The next thing I saw was the water rushing over our canoe. We were upset and all in the water. The others told me that we struck with a loud crack. I heard nothing, the thing was instantaneous'. Happily no lives were lost in this perilous crisis: 'I had not the least feeling of any danger to life until long after, and yet there have not been many escapes more miraculous'. 'We got the canoe dragged up and baled out. I then' writes Kirk, 'found what I had saved was almost all Expedition stores, my own things had all gone, and I now possessed the clothes I wore which were in rags, a bag with things for lighting pipes, and a book with a few altitudes worked out, also Lindley's *Vegetable Kingdom* and a rifle. This was my kit. Tooth instruments, surgical case, revolver, bedding, clothes, but of all losses the loss of notes was greatest—8 volumes of notes and about 100 drawings of plants, these new ones and of interest, all botanical notes, in fact everything to keep me in mind of the trip, all was gone'.

Spindle and Bag of Palm Leaf for holding Cotton, used by natives on the Zambesi River, 7 September 1858



Spindle or Kumbhar

Spindle and large wheel used
for spinning cotton, used by women
in the Lumbini region
[Drawing by S. P. 17]
[Drawing by S. P. 18]

the Zambesi except in actual cataracts. Chicova, of which geographers have sometimes spoken as a kingdom and sometimes as a cataract, has no population on land, and a basaltic dyke we noticed on our way up was passed through during our descent without being observed; but we marked a fine seam of coal in the bank instead. Below this several rapids had been developed by a fall in the water of fifteen feet. They were quite smooth when we were marching upwards. The only great difficulty is Morumbua in Kebrabasa, and it is all but certain that at full flood, when the river in that part rises eighty feet, the cataract will be smoothed over.

The numbers of animals that come to drink at the river in the dry season are prodigious. Nowhere else are such vast herds of elephants, buffaloes and Hippopotami to be seen as in the parts between Victoria Falls and the Kafue. It was sometimes necessary to fire at the Hippopotami to get a passage for the canoes. We observed a pure white one, as if an Albino, and several piebald ones. The people were all friendly and were anxious to know if we had persuaded Sekeletu to restrain his people from making forays in their direction. As we pointed out to him the good policy of employing the inhabitants of the left bank to watch any movement of his enemy, Mosilikatze, across the river and he was quite alive to the importance of doing so, it is probable that marauding in this quarter will not be allowed.

While entering into friendly relations with the people along our route, it was mortifying to find Portuguese traders in our footsteps reaping the benefit of our labours and employing assassination as a means of increasing their power. The chief Mburuma, to whom I was accredited, was murdered at the instigation of a pretender to the chieftainship by a party of Portuguese traders. They entered the village as friends, received a present of beer, then proposed to fire off their guns in play, and shot the chief and twenty of his people. The price demanded for this act of perfidy was one half of Mburuma's country or about ten miles West of Zumbo. The tokens of possession were immediately sent down to Tette.

DAVID LIVINGSTONE

Inclosure 1 of No. 10.

Very considerable pains have been taken to arrive at the exact truth of this atrocious transaction and it was only on finding the statements of the culprits themselves coinciding with the general reports of the natives that I concluded it safe to lay it before your Lordship as a fact. The chief agent in the assassination is a Portuguese half-caste of Tette named José Anselmo de St Anna,

but better known by his native name Sequasha. With him was associated a half-caste of Goa called Augustinho. On meeting the latter and enquiring of himself about the affair he trembled a good deal and tried to justify the deed by saying 'We have put in the legal chief; the other was a usurper'. And on my remarking that the Government of Don Pedro V did not wish its territories extended by treachery, he remained silent.

On subsequently meeting Sequasha and Augustinho in company, Sequasha denied being present at the murder and added that some of his people had gone and his name had thereby become mixed up in the affair. But previous to meeting either of them, their own slaves pointed out the boundaries of the land received by him 'as payment for having killed Mburuma' and the tokens of possession sent to Tette caused great rejoicing among his friends. The people had no firearms and fled to the south bank of the river. The lands of Zumbo were purchased, and were pointed out to me in 1856 as Portuguese possessions, though no one of that nation had been near them for half a century. It was therefore a piece of gratuitous wickedness perpetrated to recover the land they had voluntarily left, the ownership of which moreover had never been denied, and that too in a country the greater part of which is quite unoccupied for either pasture or agriculture.

These two men had secured forty thousand pounds' weight of ivory—the fruits of our opening the country, for until my journey down the river in 1856, no Portuguese dared to go more than a few days' journey above Tette. And when the Earl of Clarendon caused enquiries to be¹ made about my expected approach hither, the authorities unanimously declared the² impossibility of any one coming through.

D. LIVINGSTONE

Docket: Portuguese way of re-establishing Zumbo.

Nos 12 and 13 of 1858 and No. 5 of 1859 found at Linyanti in Sept^r '60.

Received at Tette in Novr Nos 1, 2 and 3 of 1859 and Nos 1, 2, 3 and 4 of 1860 with the circulars March 1st, March 6, May 22d and 25, Novr 20 /59, accompanied by Vol. X of Hertsl^t's Treaties.

Copy [of] Inclosure 2, Senna 29 Dec./60.

I have the honour to acknowledge the receipt during the present year of the following Despatches signed by Lord John Russell:

¹ 'me' in the original.

² 'that' in the original.

Nos 1, 2 and 3 of 1859

Nos 1, 2, 3 and 4 of 1860

with the circulars of Nov. /59, accompanied by Vol. X of 'Hertslet's Treaties', of March 1st and 6th, of May 22 and 25 1860, with a report of a Mixed Commission.

In August last I found Despatches Nos 12 and 13 of 1858 and No. 5 of 1859 at Linyanti; they are signed by the Earl of Malmesbury.

DAVID LIVINGSTONE

No. 5.

H.M.S. *Pioneer*, RIVER SHIRÉ
10 Novr, 1861

Rt Honble

Lord John Russell.

MY LORD

In an ascent of the river Shiré in May last we found that the *Pioneer* answered our purpose very well until we came to the Elephant marsh where many branches leave the main stream. She was now, as in the Rovuma, found to be too deep, nearly six feet with a cargo, about double the draught intended in her plan. But in order to bring the bishop's party as near their destination as possible, as well as lessen the distance we intended to carry a boat towards Lake Nyassa, we warped her to an island a few miles below the cataracts.

On the 15th of July we left the ship at Dakanamoio is[lan]d in order to introduce the missionaries to the Manganja on the highlands East of that, and on reaching the edge of the plateau on which, for the sake of its salubrity, we recommended them to locate themselves, we were mortified to find that the Portuguese of Tette had taken advantage of the route followed by Dr Kirk to institute an extensive system of slave hunting in the very country to which we had brought the mission. The first party met was headed by a well known slave of one of the Portuguese governors (Major Secard). They had eighty four captives, chiefly women and children. On asking the people in charge who had given them authority to make war, they professed to have left Tette secretly and that the people in bonds had all been bought. While enquiring of the captives themselves, the Portuguese all escaped into the forest, and it turned out that a party of a tribe called Ajawa had been incited by these Portuguese to attack village after village of the Manganja, kill the men and sell the women and children to them. As the

captives were now on my hands, I thought the best thing that could be done was to hand them and the prisoners of three other Portuguese parties over to the bishop to try what he could make of them.

It may be observed that though the first party denied having come away with the knowledge of the authorities of Tette, others declared that they had engaged in the business with the full sanction of the present Governor (Antonio Tavares d'Almeida) and one man even volunteered to conduct us to the spot where his Excellency's own slaves were waiting to be supplied by the Ajawa. Having laid our account with the probable destruction of our private property at Tette, it was thought best to do the business thoroughly; so I sent Dr Kirk with four natives back to intercept a party with captives at the crossing of the river. This movement miscarried, and we did not actually secure the Governor's own people; but there is not the shade of a doubt of his connivance. Another party, armed with ninety muskets and headed by a white Portuguese, next appeared with the intention of surprising the Ajawa and doing the fighting themselves. They crossed the river above the ship; then, hearing that Dr Kirk had returned, supposed that he was in pursuit of them. Making a detour among the hills, [the] river was recrossed below the ship and a message sent to us by the leader 'that he had attacked no village, made no captives and had returned without any guilt'. His name could not be ascertained, as the natives knew him only by some native name, but his description points distinctly to the brother-in-law of a rebel chief who lives a few miles below Tette and who has made slave forays in other directions.

As the Manganja were all fleeing before the Ajawa and the profits arising from the latter serving the Portuguese were very small—calico valued out here at from one shilling to two and sixpence being the prices of the captives—it was thought that in a conference they might be induced to stop the effusion of blood. Unfortunately we found that, in the act of burning three villages and flushed with victory, they seemed to think that our small party would prove an easy prey. Our assurances that we came peaceably were also neutralized by some of the Manganja followers calling out that one of their great generals and sorcerers had come. The movement of slowly retiring from their village was considered evidence of fear, and on they rushed like furies, pouring in their poisoned arrows from all sides. We were then obliged in self defence to drive them off with our firearms. So little did we anticipate using them that we had only a few rounds of ammunition and, had they not been a roving body of sixty or eighty, the result might have been serious.

It is matter of regret in this, the only hostile encounter I ever had with natives, that the effect of the foolish call of the Manganja about their great sorcerer having come, did not once strike my mind as depriving us of the protection of our English name till all was over.

Returning to the ship we proceeded with the work of our own mission. A considerable quantity of cotton was purchased, though the ship was necessarily stationary and that was not the period of the cotton crop. On the 6th of August we commenced carrying a boat past the Murchison cataracts and, though hindered somewhat by cold and wet, in three weeks we succeeded in launching her on the upper Shiré. No difficulty was experienced in obtaining carriers at a very moderate rate of payment, and far less suspicion was excited than when we travelled up the Eastern bank without a boat. It seemed to be taken as a certificate of peaceable intentions as far as they were concerned. If we meant evil, it must be towards others who could only be reached by the boat.

The cataracts extend over (35) thirty five miles of Latitude; this involves over forty of land carriage. We ascend in that space about 1,200 feet, but once on the upper Shiré we are virtually on the Lake for the next sixty miles of river are all smooth, of good depth and with but a small current. Before reaching the Lake proper, we pass through a Lakelet called Pamalombe, some ten or twelve miles long and five or six broad. It is fringed with a broad belt of Papyrus, among which so much malaria or sulphuretted Hydrogen gas exists that the white paint on the bottom of the boat was blackened by one night's exposure. Myriads of Mosquitoes, shewing, as I think they always do, the unwholesomeness of the spot, warned us off, and on the 2d September we sailed into Lake, Nyassa and felt refreshed by the greater coolness of the air over that large body of water. We skirted along the Western shore, examining as a point of the first interest the depth of the Lake. The upper Shiré is from nine to fifteen feet. The Lake deepens from nine to fifteen or more fathoms. Then thirty miles up, as we rounded the mountainous promontory Cape Maclear, we could feel no bottom at a mile from the shore with our lead-line of thirty five fathoms (210 feet). Subsequently, in sounding in a bay far in the North, we found bottom at one hundred fathoms (600) but, trying again a mile outside the bay with a fishing line, no bottom could be found at 116 fathoms (696 ft); but this was unsatisfactory, as the line broke in coming up. With our present knowledge, a ship could find anchorage only near the coast.

The tongue of the Lake from which the Shiré flows is from ten to twelve miles broad and about thirty miles long. A mountainous

promontory called Cape Maclear separates this from another tongue or bay to the Westwards. It runs southwards about eighteen miles and is about ten miles broad. These arms give the south end of the Lake a forked form and, with the help of a little imagination, the Lake has the boot shape of Italy. The part above the ankle is the narrowest portion, eighteen or twenty miles. Eighteen or twenty miles thence it widened till, near the upper end, it is fifty or sixty miles broad. Its length is over 200 miles. It lies nearly on one meridian of Longitude and from its numerous bays making a very extended coastline, affords access to a very large tract of slave producing territory. When about half way up the Lake an Arab dhow fled from us to the Eastern shore with a cargo of slaves. It did the same again when we returned. It has lately been built to supply, we suppose, the great export of slaves from the Portuguese outlet of Iboe. The population on the shores of the Lake exceeds all I have seen in Africa for numbers, but probably this was the fishing season and the rains may draw off many to their agriculture. They were upon the whole very civil; no fines were levied nor dues demanded. They are clothed with the inner bark of a certain tree and the only trade they know is that in slaves. A very marked deterioration was observed when we came within the sphere of the Arab vessel. Expert thieves, probably from the East coast, crept up to our sleeping places about four o'clock on the mornings and made off with what they could lay their hands on. We had never been robbed in Africa before.

The time of our visit was unfavourable. The Equinoctial gales prevailed and, as in all narrow seas encircled with mountains, tremendous storms come on with great suddenness. A swell in which no open boat could live often got up in a quarter of an hour or twenty minutes. We had to beach the boat every night to prevent her being swamped at anchor. We were once caught in one of these frightful seas and all but lost during the six hours we rode it out.

It would have been mere foolhardiness to have attempted to cross over to the other side at that time of the year. The only feasible plan we could think of was to capture the dhow. We had no slave papers, but the owners kept it well out of our way.

The reports about the Rovuma were most perplexing. One man declared positively that we could sail out of the Lake into the river, and another that we must lift it a few yards. These might be true, as the Lake rises and falls between the wet and dry seasons as much as three feet: but another intelligent man would assert with equal positiveness that the boat must be carried at least fifty miles or a

hundred. On one point only did all agree, that the Rovuma or Lohuma is a very large river.

The natives have several crossing places. One whose width we ascertained by sketches and bearings of the mountains as the sun rose behind them, was about 35 miles. At another place they cross by taking advantage of an island, but at the upper third or fourth of the Lake they prefer going round, though that takes several days. Near the slave mart no food could be obtained except elephants and hippopotami. The natives never attempt to kill them with their bows and arrows, so fortunately for us they were very tame. Beyond this region Northwards we came on the borders of a Caffre or Zulu tribe originally from the Interior of Sofala or Inhambane in the South. Here the shores of the Lake were literally strewn [with] human skeletons and putrid bodies of the slain. The land party, which it was necessary to have in case of accident to the boat and to let our objects be known, the people never believing what a person says of himself until confirmed at the kitchen fire, was terrified at the idea of meeting the inflictors of the terrible vengeance of which the evidence everywhere met the eye, without a European in their company. Accordingly I left the boat and, by a mistake, was separated from it until the morning of the fourth day afterwards. The country was mountainous and cut up by steep ravines: the spurs of the mountains ran sheer down into the water. The boat went on ten miles the first day, then other ten the next, while, with incessant toil ascending and descending remarkably steep ravines, we could scarcely make five miles of daily actual distance. But for four goats with us we should have starved. The population had been destroyed and skeletons lay in every hut, surrounded by broken utensils: they had once cultivated a very fine species of cotton.

We met seven of these Zulus who pass by the name of Mazite, and they were as much frightened of me as the men were of them. Advancing to meet them quite unarmed, they rattled their shields with their spears (a process that inspires the natives generally with terror) because I would not sit in the sun while they sat in the shade. When I sat under the same tree and shewed them the hideous white skin of my arms, an alarm we several times observed on the Lake seemed to seize them. They would neither take me to the boat nor to their chief, and soon sped away up the hills like frightened deer. On the second day the land party declared that they were tired out. Selecting two and sending the rest back, we pushed on after the boat, which had in the meantime been prevented by a storm from returning, and on the morning of the fourth day met

her. She reported the coast in front to be worse than that I had trudged over. Mountains formed a most inhospitable coast by precipices coming down 500 or a 1,000 feet perpendicularly to the water's edge, the people either fugitives from a slave war which is raging on the opposite coast to feed the Iboe slave trade, or Pirates living on detached rocks and rushing out towards the boat till they find that it is not a large Lake canoe. A fathom of calico was demanded for a fish's head. Our provisions were expended, the land party had gone back, so though the large mountain masses loomed in the distance in which probably Lake Nyassa ends, we were obliged to return also.

From the Latitude taken before we left the boat, it is believed that we saw the Lake extending to the Southern borders of the tenth degree of South Latitude. It begins in Lat $14^{\circ} 25' S.$, and will be found in all probability 225 miles long—we say 'over 200'.

On coming out of the Zulu borders we found a most friendly chief, named Marengo, ready to supply all our wants. He presented every kind of eatable in his possession, took a valuable native ring off his arm and put it on mine, and declared how sorry he was that we could not spend a whole day with him, drinking beer; but the wind was fair, and was so often foul that the temptation to sail was greatest. On our way south we found it difficult to purchase food. This arose from our calico being of the flimsiest quality, deficient in breadth and being plastered over with starch. It was mortifying to be conscious that our goods were so inferior to those supplied by the slave traders that we appeared to the natives and ourselves as swindlers.

Had we known the direction of the winds previously as chiefly from the East, we could have navigated the Eastern much more than the Western shore. There are several islands in Nyassa, small, rocky, uninhabited and covered with dense forest. They are used only as fishing stations, and probably also in times of war. Adjacent to each of these and to many of the points of land, detached rocks jut out or lie a few feet beneath the surface. Hence a navigator must give these all a wide berth. The ship that sails on Nyassa must be strong. The Pioneer would do well there; her great draught would be an advantage. Five rivers flow from the West into the Lake and the adjacent country is all an elevated region, though the Lake itself is over 1,200 feet above the level of the sea. No current could be detected, but a long continued wind raises the water a few inches on the side to which it blows.

Fish abound in great quantity. The Alligators seem well fed on them, and seldom trouble men, so we could enjoy bathing whenever we chose. This cannot be done in any African river I know.

We know but little of the Eastern side but believe that slaving goes on more briskly there, as being nearer the places of export. We heard the booming of cannon across the Lake near the Southern end: they are said to belong to Ajawa and must have been purchased with slaves.

Arriving at the upper cataract we slung our boat to the branch of a shady tree about ten [feet] from the ground, and walked back to the lower cataract which we reached on the 8th November, after three months' trip, and were grieved to find that the Portuguese still urge on the Ajawa to capture the Manganja. So far as selling people are concerned, the Manganja, if they had the opportunity, are not a whit better than the Ajawa. I am not therefore moved in their favour by any sentiment of respect. But the process is carried on in such a systematic way it is impossible not to suspect that the Portuguese authorities intend thereby to root the English mission out of the country while they screen themselves discreetly in the background. There has never been such an export of slaves from the Zambesi since we entered it as now. They are probably exported by the great slave trader Senhor Cruz (now son-in-law to the Governor of Quilimane) from a port called Massangano, a few miles South of Quilimane. This conduct on the part of the Portuguese has a more depressing effect on the mind than scorching suns, long marches, hunger or thirst, or even than the fever itself.

I am etc.,

DAVID LIVINGSTONE

A true copy
21 Novr, 1861.

Inclosure No. 1 of Desp. 5.

It is impossible to form an estimate of the quantity of cotton that might be collected from a portion even of the country we have opened. In the valley of the lower Shiré the great draught of the Pioneer confined us to a single spot, and our dealings with the natives were limited to a space of about seven miles. But though it was not the season of the cotton crop, nor had the people been stimulated by the prospect of a market to plant more than was requisite for their own use, we bought at a very cheap rate cotton in the seed equal to 300 lbs of clean cotton. This was purchased in about four months, and it is the opinion of those who attended

to this duty during our absence at Lake Nyassa that, had it been possible to devote more time to it, at least double the quantity might have been procured. This valley contains large patches of marsh, but it is bounded by ranges of hills the population of which all cultivate cotton. When we first ascended the river the Portuguese looked on the journey as a very rash and dangerous one. The Manganja were described as an exceedingly ferocious people, and the crowds that swarmed along the banks, armed with bows and poisoned arrows, keeping watch over us night and day, gave countenance to the idea that they were dangerous savages. But we soon gained their confidence and lately three missionaries came up the Shiré in common country canoes without knowing a word of the language or a bit of the way. We have found the people to be rather a timid race. Both sexes engage in agriculture, and cotton agents of common sense might pursue their calling in any part of the country in perfect security.

The next hundred miles of the Shiré, extending from the foot of the cataracts to Lake Nyassa, would yield more cotton than the lower valley. Recent disturbances by slave hunters might interfere with the amount during the first season, and this remark may apply to the next two hundred miles bathed by the waters of the Lake, but the presence of the small steamer which we hope soon to place above the cataracts will very soon produce that state of confidence which leads the natives to cultivate for sale. We have opened a cotton field in the Shiré and Lake Nyassa four hundred miles in length. We possess the confidence of the people on a large section of that field. The time seems to have come when private enterprise ought to come forward to develop the trade. It is doubtful whether Govt servants were ever intended to become collectors of cotton.

The chief object of our exploration was to find a new path exterior to the Portuguese claims. Though not so successful as we hoped to be, it was satisfactory to find the Rovuma uniformly described as a very large river. It is highly probable that this, or another in dominions of the Sultan of Zanzibar, will be our pathway. But even in the event of failure, small companies might at once employ their capital profitably, for the cotton is of superior quality and the entire distance from the Lake to the East coast is nothing like the distances that cotton travels in India.

We have hitherto been unwilling to invite private enterprise, and indeed have discouraged capitalists from risking their goods while the Portuguese obstinately refused a passage to lawful commerce to countries they never saw nor heard of. They have now built a fort

at the mouth of the Shiré with a view to be enriched by the cotton trade dues, and they are fast depopulating the country from which the cotton is to come.

DAVID LIVINGSTONE

Inclosure 2 of Desp. 5.

It will be necessary to purchase calicoes for the payment of the labourers in making a road past the cataracts. We can get them out here about as cheaply as men will sell them in England when they know that the Government has to pay. It seems as if they believed that cheating Government were no sin. One of the bales [*word illegible: ? received*] by the Pioneer consisted of fragments, some not a foot square, and the velvet was really more easily torn than this paper.

The balance of money on hand will suffice for all we need this next year in the way of wages and incidental expenses. For ship's stores and provisions we rely on the naval authorities at the Cape.

Inclosure 1 of Despatch 5.

Docket: Oxf'd and Camge mission.

Fighting the Ajawa.

SHIRÉ, 15 Novr, 1861

I beg leave to state, for your Ldp's private information that Bishop Mackenzie told me that he went and attacked another body of Ajawa near Mount Zomba, drove them away and burned their town. I had sent the Engineer, quarter-master and one seaman of the Pioneer, who were much reduced by Fever up to the highlands for a month for change of a air, it being much more likely that they would regain their strength in that cold climate than in the hot Shiré valley. They were invited by the bishop to go with the missionaries to the fight and inconsiderately went. They recollected afterwards that they had no orders to do so, nor indeed to fire a shot unless they were attacked, but are to be excused in consideration of the position of the gentleman who asked them to go. The blood was shed by the mission party alone. The bishop seemed rather proud of the affair, and spoke of a second body to which he and his associates had gone since our men returned to the ship, but without mentioning the particulars.

I very deeply regret having gone to the Ajawa on the occasion in which we were attacked. Had I in the least anticipated that result, I should have used messages, presents and fair words before venturing near them. I then advised the mission to remain at their station and act entirely on the defensive. The principal chief of the

country, (Chisimse) came and urged the necessity of driving away all the Ajawa out of the country. I told him that white men did not come into the country to fight and never would use their arms except in self-defence, as in the case which had just occurred; that he had, by selling the people, invited the Ajawa and Portuguese into his country; that we had come into the country to put a stop to selling people by shewing them how to obtain cloth by the cultivation and sale of foreign cotton, and that, if the Ajawa did not cease to attack his people, the Manganja, who are by far the most numerous, might deposit their women and children with the bishop, while they drove the Marauders away. The chief replied that he had no foreign cotton seed—a mere subterfuge, for it is cultivated largely within fifteen miles of him. But, to take away all excuse, we distributed a quantity forthwith to all his people. After again trying to induce us to go against his enemies, by causing a party of his men to arrive, in breathless haste, with the false report that the Ajawa were close upon us in force, and receiving from me a still more positive assurance that we should not engage in war, he sulkily said, 'Then I am dead already' and departed.

A missionary ought in all lawful things to identify himself with the interests of his people, but it is doubtful whether this should extend to fighting for them. I shall keep carefully aloof from the policy adopted by this new mission, not so much because my explanations of the policy usually pursued by philanthropists have been stultified by the fighting after I left, but because it has made the Ajawa enemies of the English, and they will continue so. The first affair could easily have been got over, as we were able to say, 'You began it', 'you attacked us', but not the second and third by the bishop.

D. LIVINGSTONE

(A true copy).

LETTERS OF INSTRUCTION

1. To COMMANDER NORMAN BEDINGFELD

2. To GEORGE RAE

3. To DR JOHN KIRK

Appendix No. 1. Principal duties of the Botanist, by
Joseph D. Hooker

Appendix No. 2. Instructions to the Zoologist, by
Richard Owen

Appendix No. 3. To Richard Thornton from Roderick
I. Murchison

4. To CHARLES LIVINGSTONE

5. To RICHARD THORNTON

6. To THOMAS BAINES

Introductory Note

LIVINGSTONE's letters of instructions to his officers, with certain additional documents from other sources, are given in the order in which they appear in Livingstone's first Zambezi journal, A¹, where they appear in Charles Livingstone's handwriting in attested copies.

They are of significant interest because they show the traveller with his eye fixed almost exclusively upon his visionary field of work on the central highlands among the Makololo and their tributary tribes. The intervening obstacles in the course of the Zambezi, its uncharted channels, its sandbanks and the horrors of the Kebrabasa rapids, seem to have little place in his consciousness. A short halt at Tete, and he and his party, with their stores, would pass on to the central dépôt at the confluence of the Kafue and the main river.

The letters also illustrate his bearing towards his officers who, understandably enough—Livingstone being Livingstone—were secondary to the object of the mission. He appears as neither unkind nor unfriendly but oddly aloof, as one whose intent gaze was absorbed elsewhere, upon something beyond all personal considerations. It is interesting to note particularly his letter to his brother, wherein the only hint of kinship appears in his taking for granted that Charles would not need to have the aims and importance of the enterprise set out in any detail. Notable, too, is the fact that no mention is made of Charles as 'moral agent', as if this were an afterthought invented for the published *Narrative* to warrant his presence in the Expedition. The contrast between his responsibilities, as set out with marked emphasis in the letter of instructions, and his complete failure to come anywhere near the fulfilment of them, is strikingly manifest in later passages in the journals and elsewhere. Yet fraternal loyalty dealt with generous leniency with the defaulter throughout.

In reproducing the letters to Richard Thornton and Thomas Baines repetitions relating to health, successions in leadership, behaviour towards natives and the like, have been omitted. It may be noted that between Charles Livingstone's transcript of the Instructions to Kirk and the original printed on pp. 103-108 of *Kirk on the Zambesi* there are occasional minor verbal variations.

David Livingstone to Norman Bedingsfeld

SCREW STEAMER *Pearl*
10th April, 1858

Commander Norman Bedingsfeld, R.N.

SIR,

1. The main object of the Expedition to which you are appointed Naval Officer is to extend the knowledge already attained of the geography and mineral and agricultural resources of Eastern and Central Africa, to improve our acquaintance with the inhabitants, and engage them to apply their energies to industrial pursuits, and to the cultivation of their lands with a view to the production of the raw material to be exported to England in return for British manufactures; and it may be hoped that by encouraging the natives to occupy themselves in the development of the resources of their country, a considerable advance may be made towards the extinction of the slave trade, as the natives will not be long in discovering that the former will eventually become a more certain source of profit than the latter.

2. As Naval Officer of the Expedition the charge of the Steam Launch *MaRobert* and her crew devolves upon you, and as you have had such ample experience in African river navigation the details of procedure in the river must be left very much to your own judgement, but the instructions from Her Majesty's Government direct that on arriving at a point opposite the Zambesi the Bar of the Luabo branch will be examined in your whale-boat not only to prevent risk to the '*Pearl*' but with a view to future navigation.

3. It may also be advisable to examine the vicinity of another branch reported by Lieut. Hoskins and Captain Parker as lying seven miles to the Southward of Luabo, as it is said to have a safer Bar and a better harbour than any other branch of the Zambesi; but you will be guided by your own discretion in view of the state of the river and period of the year in which we may arrive on the spot.

4. Having crossed the Bar and put the Launch together we must proceed, with as much speed as may be consistent with due precautions against running the *Pearl* aground, through the delta in order to avoid the risk of fever from malaria. The speed and safety of the *Pearl* will be promoted by the *MaRobert* acting as a pilot and, while so employed, you are expected to make a rapid survey of the windings of the river and note the soundings of the channel.

5. It is absolutely necessary that no risk or damage to the Colonial vessel should be incurred and the utmost precaution must be used in our course above Senna so as not to take her higher than where it will be safe for her to come down before a strong stream. From whatever point her return may be determined on, the Ma-Robert will pilot her thence down to the sea but, before departing on this mission, I shall feel obliged by your addressing a report to me containing your opinion of the capabilities of the river for navigation so far as you shall at that time have ascertained them, in order that I may transmit it to the Foreign Office, as it is desirable that H.M. Government should receive the earliest information on the subject from yourself.

6. The efforts of every member of the Expedition will probably be required to facilitate the transport of the luggage to and beyond Tett[e], which is the most advanced post of civilization, but, the chief power in the country adjacent being in the hands of two or three influential chiefs, it will be our duty to spend some little time in visiting them to invite them to turn the attention of their people to the cultivation of cotton by giving them a supply of better seed than that which they already possess and also to explain the benefit that they would derive from an exchange of the natural productions of Africa, as Ivory, cotton, buaze, etc., for the manufactures of Europe, and generally hold out every encouragement in order to induce them to give up their warlike and predatory habits and substitute the peaceable pursuits of agriculture and commerce. The time devoted to these matters will enable you to make a more complete survey of the river both below and above Tett[e], and it will also allow the Botanist and Geologist to glean a general idea of the botanical and mineral resources of the country adjacent to that point.

7. It is also one of the objects of the Expedition to develop trade and while a portion of the goods we carry with us are designed for presents and the purchase of food, a part also is to be devoted to attempts to develop a trade in cotton, buaze, etc., or other substances which are likely to stimulate the industry of the people.

It is exceedingly gratifying to me to feel assured that I have your cordial sympathy in every effort that may be made for the elevation of the degraded African race; and as the Botanist, with a view to the supplanting by lawful commerce the odious traffic in slaves, is directed to search for dye-stuffs, oils, medicinal substances and fibrous tissues, I call your attention to a sketch of the principal duties expected from him (Appendix No. 1), with the conviction that, should you see anything in his department in which you can render assistance, you will gladly afford it.

8. Our stay in the vicinity of Tett[e] must however be comparatively short, as it is necessary to get past the rapid Kebrabasa as early in the season as possible. Should the Pearl reach Tett[e] it would even be advisable to visit this important point to ascertain its nature and the possibility of passing it while the river is comparatively high, so as to avoid the necessity of taking the Launch to pieces for portage.

Having surmounted that obstacle, we shall visit the chiefs above it, to explain the objects of our coming as before, at the same time making special mention of our detestation of the traffic in slaves and our desire to establish a free trade in goods on the river Zambesi.

9. Having ascended thence to some eligible spot beyond the confluence of the Kafue and Zambesi and having reached a tolerable elevation after examination of the country adjacent, and obtaining the consent of any of the chiefs who may lay claim to the soil, we shall erect the iron house to serve as a central depot. As the spot selected will probably be on the side of one of the hills which flank the Zambesi, and sufficiently high to secure salubrity, a small plot of ground may at that altitude be planted with wheat and European vegetables as an experiment and also to promote the comfort and health of the expedition, while another small spot at a lower level may be planted with cotton and sugar cane and given in charge to the headman of any village adjacent in order to induce the natives to take an interest in the result. These experiments, though not directly in your department, may yet have such an important bearing on slavery throughout the world that I trust to receive your hearty cooperation therein.

10. The central depot once established and intercourse with the Makololo set on foot, more extensive scientific observations and explorations in company with that people will be advisable. Specimens of any new or rare animals, birds, fishes or insects that may be met with, may be deposited at the central station. You are not expected to engage systematically in Zoology, but accident may put you in the way of securing valuable specimens with the aid of your Kroomen.¹ I therefore hand you Appendix No. 2 for your information, but no service is required in consequence thereof.

11. Although these explorations and collections are very desirable, you will understand that Her Majesty's Government attach more importance to the moral influence which may be exerted on the minds of the natives by a well regulated and orderly household of Europeans setting an example of consistent moral conduct to all

¹ After 'Kroomen' is a caret mark and an interpolated addition: 'most important service might be rendered'.

who may congregate around the settlement, treating the people with kindness and relieving their wants, teaching them to make experiments in agriculture, explaining to them the more simple arts, imparting to them religious instruction as far as they are capable of receiving it, and inculcating peace and good will to each other.

12. The Expedition is well supplied with arms and ammunition and it will be necessary to use these in order to obtain supplies of food as well as to procure specimens for the purposes of natural history¹ . . . exact number of persons engaged before witnesses will often prevent that heartburning and discontent which otherwise may ensue.

Let the payment be made invariably into the hands of the man who has performed the work. Unless this is done the idea of property in the labour of the lower classes of the population is engendered in the minds of the under chiefs; but by direct payment a most important doctrine is most widely inculcated and in process of time each man comes to feel that he owes subjection to the head chief alone and is otherwise a free subject.

15. The chiefs of tribes and leading men of villages ought always to be treated with respect and nothing should be done to weaken their authority. Any present of food should be accepted frankly, as it is impolitic to allow the ancient custom of feeding strangers to go into disuse. We come among them as members of a superior race and servants of a Government that desires to elevate the more degraded portions of the human family. We are adherents of a benign holy religion and may by consistent conduct and wise patient efforts become the harbingers of peace to a hitherto distracted and trodden down race. No great result is ever attained without patient long-continued effort. In the enterprize in which we have the honour to be engaged deeds of sympathy, consideration and kindness which, when viewed in detail, may seem thrown away, if steadily persisted in are sure ultimately to exercise a commanding influence. Depend upon it, a kind deed is never lost.

16. Kolbe's *Pollyglotta*² *Africana*, Bleek's *Vocabulary of the languages of Mosambique* and an *Analysis of the Sichuana tongue* are at your service and you are to endeavour to master the latter, as it is generally spoken in the Makololo Country, and its acquisition will materially aid your other pursuits.

17. You are distinctly to understand that your services are en-

¹ At this point there are one or more pages missing. The Instructions are resumed towards the end of Section 14.

² So in the original.

gaged for two years unless any unforeseen accident should happen to the Expedition, when you will be set free as soon as an opportunity is afforded for returning to England.

18. In the case of my being prostrated by illness, or by accident rendered incapable of conducting the Expedition, the charge of it will devolve upon you. Should you too fail, it will devolve on Dr Kirk and then on Mr Charles Livingstone, but immediate information of such an event is, if possible, to be transmitted to England for further instructions.

19. You are welcome to consult a copy of the original instructions from Her Majesty's Government and it is hoped that you will enter cordially into the spirit of them and, as far as your influence goes, see that they be faithfully carried out by our companions.

20. The Expedition is supplied with five chronometers and all necessary astronomical and surveying instruments, together with those for magnetic and meteorological observations.

You have especial charge to determine the latitude and longitude and Altitude above the sea of every important station and roughly to map the country you pass through, and you are required to make such magnetic and meteorologic observations as the nature of the service will admit.

21. Finally you are strictly enjoined to take the greatest care of your health.

I rejoice most unfeignedly in being associated with you in this noble undertaking and feeling the fullest confidence in your zeal in the great cause of African civilization I heartily commit you and the cause in which I trust you will be an influential pioneer to the safe keeping of the Almighty Disposer of Events.

I am your

most obedient servant

DAVID LIVINGSTONE

A true copy of
Commander Bedingfeld's instructions
Charles Livingstone.

David Livingstone to George Rae

SCREW STEAMER *Pearl*

15th April, 1858

Mr George Rae

SIR

1. The main object of the Expedition to which you are appointed [*word illegible*] Engineer and practical mechanic is to extend the knowledge already attained of the Geography and mineral and agricultural resources of Eastern and Central Africa, to improve our acquaintance with the inhabitants and to engage them to apply themselves and their energies to industrial pursuits and to the cultivation of their lands, with a view to the production of raw material to be exported to England in return for British manufacturers. And it may be hoped that by encouraging the natives to occupy themselves in the development of the resources of their country a considerable advance may be made towards the extinction of the slave trade, as the natives will not be long in discovering that the former will eventually become a more certain source of profit than the latter.

2. On arriving at the mouth of the Zambesi the Steam Launch *MaRobert* will be put together in order to pilot the *Pearl* as quickly as possible through the delta. Commander Bedingfeld has the charge of her and you are required to obey his orders and render every assistance in your power for the furtherance of the great objects of the Expedition.

Your strenuous efforts and those of every member of the party must be devoted first of all to the quick passage of the luggage up the river until we reach the healthy highlands where the iron house will be erected as a central depot and where the objects of the Expedition may be pursued among a friendly people.

3. The Central Station once erected and intercourse with the friendly Makololo established, a small plot of ground at a considerable altitude will be planted with wheat and European vegetables as an experiment and also to promote the comfort and health of the party; while another spot at a lower elevation will be planted with cotton and sugar cane and given in charge of the headman of some village in order to induce the natives to take some interest in the result. Excursions will also be made along the rivers and different chiefs visited and various efforts made to open up the country to European enterprise.

4. Although those explorations and efforts are very desirable you

will understand that Her Majesty's Government attach more importance to the moral influence which may be exerted on the mind of the natives by a well regulated and orderly household of Europeans setting an example of consistent moral conduct to all who may congregate round the settlement, treating the people with kindness and relieving their wants, leading them to make experiments in agriculture, explaining to them the more simple arts, imparting to them religious instruction as far as they are capable of receiving it and inculcating peace and good will to each other.

Such being the views of Her Majesty's Government you will have it in your power to aid the natives very efficiently by your mechanical skill and I am sure you will do what you can by courteous Christian deportment towards all the other members of the expedition and by kind considerate treatment of the natives, to follow the great end we have set ourselves to attain.

6. You are distinctly to understand that your services are engaged for two years unless some unforeseen accident should happen to the Expedition, when you will be set free as soon as an opportunity is afforded for returning to England. Should I be prostrated by illness or by accident be rendered incapable of conducting the Expedition, the charge of it will devolve on Commander Bedingfeld. If he too fail, then on Dr Kirk, and then on Mr Charles Livingstone, they being as fully authorized in that position as I am in case of any individual refusing to follow their reasonable directions.

Trusting that you will enter cordially into all the arrangements of the Expedition and that you will not only perform your service with comfort, but be preserved by our Almighty Protector to return to your friends with honour and to look back to it with satisfaction till your latest day.

I am etc

DAVID LIVINGSTONE

A true copy of
Mr George Rae's instructions,
Charles Livingstone.

David Livingstone to John Kirk

SCREW STEAMER *Pearl*

At sea off Madeira. 18th March, 1858

Dr John Kirk

SIR

1. The main object of the Expedition to which you are appointed Economic botanist and medical officer is to extend the knowledge already attained of the Geography and mineral and agricultural resources of Eastern and Central Africa, to improve our acquaintance with the inhabitants and to engage them to apply their energies to industrial pursuits and to the cultivation of their lands with a view to the production of raw materials to be exported to England in return for British manufactures. And it may be hoped that by encouraging the natives to occupy themselves in the development of the resources of their country, a considerable advance may be made towards the extinction of the slave trade, as the natives will not be long in discovering that the former will eventually become a more certain source of profit than the latter.

2. It is intended that the Expedition should pass through the malarious district at the lower portion of the Zambesi river as quickly as possible, and it will be necessary for you to put into practice those precautionary measures against fever by the use of Quinine which the experience of the Niger Expedition and your own judgement may suggest as likely to secure the health of your companions.

3. The efforts of every member of the Expedition will probably be required to facilitate the transport of the luggage to and beyond Tett[e], the most advanced post of civilization; but, the chief power in the country adjacent being in the hands of two or three influential chiefs, it will be our duty to visit them and invite them to turn the attention of their people to the cultivation of cotton by giving them a supply of better seed than that which they already possess, and also to explain the benefits that they would derive from an exchange of the natural productions of Africa, as Ivory, Cotton, buaze, etc., for the manufactures of Europe, and generally to hold out every encouragement in order to induce them to give up their warlike and predatory habits, and substitute the more peaceable pursuits of agriculture and commerce.

The time occupied in attending to these matters will enable you, if we find it to be consistent with your personal safety, to glean a general idea of the resources of Tett[e] and to ascertain, in as full

detail as the time will allow, the nature of the plant called Buaze, paying particular attention to the probable amount to which it and any other fibrous substances may be obtained and you will be good enough to furnish me with a Report for transmission home to the Foreign Office.

4. Your attention is particularly requested to the discovery of dye stuffs, gums and medicinal substances, in the hope that should either these or fibrous tissues [exist] in quantities sufficient to warrant commercial enterprise you may aid in the great work of supplanting by lawful commerce the odious traffic in slaves.

It is gratifying to me to feel assured that this object commends itself to your mind as a most important and noble one, and I have the pleasure of handing you a copy of a sketch, Appendix No. 1, of the principal duties expected of you in the botanical department drawn up by that eminent Traveller and Botanist, Dr J. D. Hooker, whose success in reflecting honour on our country I heartily wish you may equal, and requesting, for this part of our travels at least, your earnest and exclusive attention to the same. Other objects of interest will no doubt press on your notice but considering that the Botany of this region is nearly unexplored, that there is a danger of overworking yourself, that your energies will be greater in the second than the first year and that the primary objects of the Expedition are to gain accurate information respecting the vegetable and mineral resources of the country, I trust you will see the propriety of limiting for a time the range of your pursuits.

5. Our stay in the vicinity of Tett[e] must necessarily be short because it is essential to proceed at an early period to the rapid Kebrabasa or Chicova, to ascertain the possibility of passing it while the river is still comparatively high and thus avoid the necessity of taking the Launch to pieces for portage. The people near to the Portuguese settlements who have been in contact with slave traders not being so trustworthy as those farther inland who have not been subjected to the prejudicial influence of such communication, it will be unadvisable to make any distant excursions. Our efforts must be directed to the establishment of a depot at some eligible spot beyond the confluence of the Kafue and Zambesi. Having reached a tolerable elevation and examined the country adjacent, it will be advisable, after obtaining the consent of any natives who may lay claim to the soil, to set up the iron house to serve as a central station. As the spot selected will probably be on the side of one of the hills which flank the River and sufficiently high to secure salubrity, a small plot of ground may at that altitude be planted with wheat and European vegetables as an experiment and also in

order to promote the comfort and health of the Expedition, while another small spot at a lower level may be planted with cotton and sugar cane and given in charge to the headman of any village adjacent in order to induce the natives to take an interest in the result.

6. The central depot once established and intercourse with the natives set on foot, a more extended range of scientific observations will then be advisable. You may then follow out, as opportunity offers, the instructions on Zoology from Prof. Owen contained in Appendix No. 2 and collect specimens of any new and rare animals, birds, fishes or insects that may be met with in excursions which, in company with the Makololo, may safely be made and the results be deposited at the central station.

7. Although these explorations and collections are very desirable, you will understand that Her Majesty's Government attach more importance to the moral influence which may be exerted on the mind of the natives by a well regulated and orderly household of Europeans setting an example of consistent moral conduct to all who may congregate round the settlement, treating the people with kindness and relieving their wants, teaching them to make experiments in agriculture, explaining to them the more simple arts, imparting to them religious instruction as far as they are capable of receiving it and inculcating peace and good will to each other.

8. One especial means of gaining their favour will be by giving them the benefit of your medical skill and remedial aid. They have medical men among themselves who are generally the most observant people to be met with: it is desirable to be at all times on good terms with them. In order to this light cases except among the very poor ought to be referred to their care and severe cases should be inquired into of the doctor himself, and no disparaging remark ever made in the presence of the patient. This line of conduct will lead to the more urgent cases only being referred to you. Time and medicine will both be saved while your influence will be extended. Never neglect the opportunity which the bed of sickness presents of saying a few kind words in a natural respectful manner and imitate, in as far as you can, the conduct of the Great Physician whose followers we profess to be.

9. The Expedition is well supplied with arms and ammunition, and it will be necessary at times to use these in order¹ to obtain supplies of food, as well as to procure specimens of animals for the purposes of Natural history. In many parts of the country which we hope to traverse the larger animals exist in great numbers and, being com-

¹ The words 'to use these in order' are inadvertently repeated.

paratively tame, may be easily procured. I would earnestly press on you the duty of a sacred regard to life, and never to destroy it unless some good end is to be answered by its extinction. The most vital parts should be aimed at and no shot fired unless the animal [*words illegible*]¹ so that it may be quite probable that the mortal part will be struck. The wanton waste of animal life which I have witnessed from night hunting and from the ferocious but childlike abuse of instruments of destruction, as well as the wish that the habits of certain races of animated creation which are evidently destined, at no very distant date, to extinction, should be calmly and philosophically observed while there remains the opportunity, make me anxious that none of my companions should be guilty of similar abominations.

10. It is hoped that we may never have occasion to use our arms for protection from the Natives, but the best security from attack consists in upright conduct and the natives seeing that we are prepared to meet it. At the same time you are strictly enjoined to exercise the greatest forbearance towards the people and while retaining proper firmness in the event of any misunderstanding, to conciliate so far as possibly can be admitted with safety to our party.

11. It is unnecessary for me to enjoin the strictest justice in dealing with the people. This your own principles will lead you invariably to follow, but it is decidedly necessary to be careful not to appear to overreach or insult anyone. Care must be taken in every case in which a native is to be employed that the terms be well understood beforehand, and a little patience in settling the amount of remuneration before witnesses, and the exact number of persons engaged will prevent that heart-burning and discontent which otherwise may ensue. Let the payment be made invariably into the hands of the man who has performed the work. Unless this is done, the idea of property in the labour of the lower classes of the population is apt to be engendered in the minds of the under chiefs. But by direct payment a most important doctrine is widely inculcated and in process of time each man comes to feel that he owes subjection to the head chief alone and is otherwise a free subject.

12. The chiefs of tribes and leading men of villages ought always to be treated with respect and nothing should be done to weaken their Authority. Any present of food should be accepted frankly. It is impolitic to allow the ancient custom of feeding strangers to go into disuse. We come among them as members of a superior race and servants of a Government that desires to elevate the more

¹ ? be near.

degraded portion of the human family and adherents of a holy benign religion and may by consistent conduct and wise patient efforts be the harbingers of peace to a hitherto distracted and trodden down race. No great result is ever attained without patient long continued effort. In this enterprize in which we have the honour to be engaged, sympathy, consideration and kindness, which when viewed in detail may seem thrown away, if steadily persisted in, are sure ultimately to exercise a commanding influence. Depend upon it, a kind word or deed is never lost.

13. You will have access to Kolbe's *Pollyglotta*¹ *Africana*, Bleek's vocabulary of the languages of Mosambique, and an Analysis of Sichuana tongues, and you are to endeavour to master the latter language, as it is generally spoken in the Makololo country and its acquisition will materially aid you in all your pursuits. Should opportunity offer, you are expected to collect vocabularies of other dialects, using the system already employed in the Sichuana, taking the English consonants and giving the vowels the sound they have in Italian, Spanish, German and in most European languages.

14. You are distinctly to understand that your services are engaged for two years unless any unforeseen accident should happen to the Expedition, when you will be set free as soon as an opportunity is afforded for returning to England.

15. In the event of my being prostrated by illness, or by accident rendered incapable of conducting the Expedition, the charge of it will devolve upon Commander Bedingfeld. If he too should fail, it will devolve on you and then on Mr Charles Livingstone, but immediate information of such an event is, if possible, to be transmitted to England for further instructions.

16. You are at liberty to consult a copy of the original Instructions and it is hoped that you will enter into the spirit of them and, as far as circumstances will allow, endeavour to carry them into effect.

17. Finally you are strictly enjoined to take the greatest care of your own health and of the Expedition. My own experience teaches the necessity of more than ordinary attention to the state of the Alimentary canal. Constipation is almost sure to bring on fever and it would be well if you kindly explain to the different members of² the necessity of timely remedial aid to overcome any tendency to it, especially if accompanied by drowsiness, want of appetite, dreaming, unpleasant taste in the mouth in the mornings. And if Quinine, combined with a mild aperient, be administered, this precautionary measure will often ward off an attack of this formidable disease.

¹ So in the original.

² So in the original.

Feeling the greatest confidence in Your Zeal in the great cause of African civilization and rejoicing in being associated with you in this noble work I heartily commit you and the cause in which I hope you will be an influential pioneer to the safe keeping of the Almighty Disposer of Events.

(signed) D. LIVINGSTONE

A true copy of
Instructions.

Charles Livingstone;
attest.

Appendix No. 1¹

The following is a sketch of the principal duties expected of the Botanist.

1. To ascertain exactly the species and varieties of plants in cultivation among the natives and colonists for all purposes; to preserve good herbarium specimens of these in leaf, flower, and, when possible, in fruit, accompanying them with notes: and to preserve, dried or in spirits, the larger fruits, cereals, etc., for exhibition in the Museum of Economic Botany at Kew. It is probable that a full investigation of such products will demonstrate the capabilities of the country for increased cultivation, and since East African vegetables are known to be, with a few exceptions, commonly cultivated in India, the climate and resources of the several districts of the latter country being approximately known, a safe standard of comparison will be obtained upon which to base conclusions as to the manner in which the vegetable resources of Eastern Africa may best be further developed.

2. To ascertain exactly the indigenous plants yielding food, clothing, medicinal products, timber, ornamental wood, gums, resins, oils, dye stuffs, etc.; to procure good herbarium specimens of them in leaf, flower and fruit, accompanied with specimens of the woods (which should bear the same numbers as the dried specimens branded or stamped upon them) and of other products of all kinds for experiment and exhibition in England.

With regard to such plants and their products, their value may in certain cases be ascertained upon the spot. Thus a well instructed

¹ *Marginal note*: A true copy / Charles Livingstone / Attest. The original was written by Joseph D. Hooker, of Kew, on 13 January, 1858.

scientific man of careful habits of observation may, by cautious experiments in the case of medicinal products and with the aid of a few chemical preparations in the case of dyestuffs, etc., either at once obtain conclusive results or be led to direct his attempts to the investigation of allied plants.

3. Though considerable practical results may be expected from the attention of a skilled observer being directed to the above points of inquiry in a field so novel and teeming with vegetable life. Yet, the Committee of the Royal Society consider that the material objects of this department of the East African Expedition cannot be fully carried out, except the person charged with these duties be impressed with the importance of thoroughly investigating scientifically the climate and vegetation, and of ascertaining the laws that regulate the presence of exuberance of the latter and the reasonable chances there may be of replacing it by introduced plants. They would advert to the fact that the introduction of tea, coffee, indigo, oats, and other most important recently introduced vegetable products into India was due to the recommendations of experienced men of high scientific attainments (Sir Joseph Banks, Sir William Jones, Drs Wright, Royle, Wallich, Falconer) whose experiments almost invariably proved successful, while innumerable similar attempts of uninstructed persons, however powerfully supported, have failed. Now it is generally supposed that the regions to which Dr Livingstone is proceeding, are well adapted to the cultivation of indigo, cotton, coffee, rice, spices, sugar, etc., only because the favourable conditions of the climate and soil are manifest: but it must not be forgotten that the unfavourable conditions, if any, are in such circumstances always hidden and subtle, often depending on the abundance and vigour of the native vegetation which in all countries interposes a formidable obstacle to the introduction of cultivated plants. It is hence most important, both in this and other inquiries of the same nature, that the Botanist should make a full collection of the native plants of every kind with notes of their localities, general abundance and distribution, for an accurate investigation of these will afford to himself the surest foundation on which to base his conclusions and will enable many who cannot visit the country to suggest plans for its amelioration. This is the more necessary because, owing to the novelty, luxuriance and variety of a tropical vegetation, it is impossible for any Botanist, however skilled and learned, to obtain a definite idea of its real nature except he not only observe each vegetable form but takes a record of it in the shape of a specimen.

Every effort should therefore be made by the expedition towards

the formation of a complete herbarium for reasons quite independent of its scientific value.

(signed) JOSEPH D. HOOKER

Royal Gardens, Kew,
13 *Jan*y, 1858

Appendix No. 2¹

Instructions for the Zoologist of the Zambesi Expedition:
Tsetse fly (*Glossina Morsitans*).

1. The most important practical question demanding the attention of the Zoologist of the Zambesi Expedition is the Natural History of the Tsetse-fly (*Glossina Morsitans*). The alleged fatal effects of this insect in the case of oxen and horses subject to its bites, should be determined with the utmost possible precision in regard to the number of bites or punctures occasioning death, the previous state of health of the animal bitten, the temperature, locality and other external conditions coincident with the wounds and their fatal result. It should first be determined whether one or more kinds of fly have been designated by the term Tsetse. And if this is restricted to the *Glossina Morsitans*, next whether any other species of insect produces similar effects on animals in the Zambesi district. From the concurrent testimony of travellers in South Africa it appears that the presence of the Tsetse fly is a barrier to progress by means of oxen and horses through the districts infested by it. The Tsetse-fly would prove a similar or greater obstacle to a settlement in the so infected districts by any Colony depending upon cattle or horses for food or transport. The extirpation of the species will most probably require the same kind of entomological knowledge and investigation as those which have been elicited by the rewards and prizes proposed by Agricultural Associations in reference to the extirpation of particular species of noxious insects destructive of Agricultural products in the country—the Turnip Flea, etc.

This essential preliminary kind of knowledge as guiding to the right or best steps for the riddance of the Tsetse-fly in the districts of the Zambesi infested by it will include:—the period and place of its oviposition; the nature and course of its metamorphosis:—the habitats of the larva and pupa; the ordinary food and period of existence of the insect in its perfect state:—in short, as complete a

¹ Written by Richard Owen, British Museum, 12 January, 1858. Charles Livingstone's marginal note runs: A true copy—Charles Livingstone. Attest.

natural history of it as the time and opportunities for observation and experiment may allow to be carried out by the Zoologist of the Expedition. Any alleged remedy for the poison of the Tsetse:—any application reported by the Natives to be attended with success, should be experimented with when opportunity offers, and the precise nature of the remedial product should be determined.

2. Ivory. The commercial value of Ivory, the alleged large proportional size of the tusks and fine quality of the Ivory supplied by the Elephants of the Zambesi districts render all that relates to, and can be accurately ascertained respecting the food, haunts and habits of that variety of Elephants, an object of great practical importance; especially in a consideration of the increasing scarcity and price of Ivory during the last half century.

The sexual distinction of the tusks should be carefully noted by comparison of male and female Elephants of different ages.

If the teeth of one side of the lower jaw be preserved with the tusks of each Elephant killed for the sake of the Ivory, data for determining the rate of growth of the tusks will be for the first time collected.

In the event of a female Elephant being killed while in the pregnant state, the uterus and foetus should, if possible, be preserved in a keg of spirit according to the Instructions to be afterwards referred to.

Among the best means of determining whether the large tusked Zambesi Elephants are specifically distinct from or a variety of the more Southern African Elephants a series of the grinding teeth from the first small one developed in the sucking Elephant to the last or largest grinder in the oldest Elephant should be collected.

3. *Lepidosireia*. The attention of the Naturalist should be especially directed to the probable existence of *Lepidosireus* on the Zambesi. By examining the mud-banks which may be left dry during the hot and dry season, and by digging round any hole leading vertically into the mud, a species, perhaps nondescript, of that anomalous genus may be detected and captured in its torpid state. For the preservation of such specimens and for that of animals generally, the 'Instructions' under the head 'Zoology' printed in the Admiralty Manual for collecting and observing',—of which a copy is annexed, will probably meet all the requirements under this head of the Naturalist of the Zambesi.

(signed) RICHARD OWEN

British Museum
12 Jan'y, 1858

Appendix No. 3¹

For the Geologist.

1 March, 1858

MY DEAR SIR

I have not given you my former instructions for your guidance in making your researches as the Mining Geologist of Dr Livingstone's Expedition, because I possess no other knowledge of that region to which you are going than that which has been communicated to me by Dr Livingstone himself, who is the only person who can direct your attention to the spots where it is probable you will find the most interesting subjects for the exercise of your functions.

At the same time I cannot allow you to depart without conveying to you a few suggestions as to the general Geological results which may be obtained by your observations—(in addition to the hints which I have expressed to you *viva voce*).

1. In ascending the Zambesi endeavour to mark the width, from E to W, of the modern Delta and observe if the recently accumulated banks of the river expose layers of stratified mud or sand and, if shells exist, see where the marine forms first begin to be assimilated with those of fresh water.

2. Look sharply out for the first emergence from beneath the accumulations of the Delta of any older deposits and fail not to endeavour to procure organic remains.

As you may be halted at Tete, lose no opportunity of detecting fossils—and be specially careful to label them at once with the *gummed labels* which you should take with you, and wrap each specimen in at least two envelop[e]s of paper.

3. When you reach the higher ground where the iron house is to be erected, you will of course go to work systematically upon the main object of your employment, viz., to discover the thickness, lie and character of the coal beds and the trend and apparent dimensions and probable value of any ores of Iron, Copper, Lead, etc.

4. In reference to the coal deposits seek dilligently for fossil *shells*, as well as *plants*, and hunt up the ravines and water courses to detect, if possible, the presence of lime stones. The latter are necessarily of primary importance for manufacturing the ores and other uses and are also most likely to yield fossils.

5. Your own acquirements as a metallurgist will enable you easily to test the value of any given specimens of metallic ore, limestone

¹ *Marginal note* : A true copy / Charles Livingstone / Attest.

or coal, *but* the more essential thing you have to ascertain is the *quantity* of such materials—their accessibility, and whether they could in the sequel be worked by open or horizontal galley or adit. For if the country be much broken up by the intrusion of igneous rocks, or that the strata (from other causes) are highly dislocated, the future subterranean workings would be of comparatively small value.

6. Be careful to note the *strike* of the stratified rocks in each district independently of any inclinations to the one side or other of such direction, and always try to determine such strike in the highest ground in your neighbourhood.

7. Note if there be evidences of the silicified fossil wood (specimens of which were brought home by Dr Livingstone) being imbedded—or whether such specimens are to be found only as rolled or drifted fragments—if they be imbedded, the leaves and branches as well as the stems or trunks ought to be discoverable.

8. Determine whether the coal in question is of the Old Coal Age (which its plants and shells will do at once) or whether it be of Oolitic Jurassic Age. (It may even be a lignite of older Tertiary Age). Perhaps you may discover animals to be the *Dycenodon* of Owen.

9. See if the iron ore occurs in nodules only—and whether there are not masses of magnetic Iron ore assimilated with the igneous and eruptive rocks.

10. If you should push your enquiries sufficiently far to the West, pay special attention to the *axis* of the Eastern Chain of S. Africa and its composition, etc., and see to what extent it is composed of quartz rocks, dolomite, etc.—looking out closely for gold veins and gold drift *along that axial line* and *upon its flanks*.

11. Should the exploration be continued still further Westward so as to touch the slope of the hills which are flanked by the *great central watery plateau*, endeavour by all means to obtain some of the tufaceous deposit of that region and bring away the shells and plants which it envelopes.

12. Lastly, Beware of the exhalations at sunset and, as much as possible, avoid checked perspiration, and do not over-expose yourself through zeal. May you distinguish yourself in your profession and return with knowledge and in health, and believe me to be your sincere well wisher.

(signed) RODERICK I. MURCHISON

*David Livingstone to Charles Livingstone*SCREW STEAMER *Pearl*, 10 May, 1858¹

Mr Charles Livingstone

SIR

As you have become well acquainted with the objects which Her Majesty's Government have in view in this Expedition to Eastern and Central Africa, it is only necessary that I give you general instructions respecting the duties you are expected to perform.

2. Should the Portuguese at Tete afford us suitable accommodation, it will be your duty to take charge of the luggage and, while remaining at that station, the standard chronometers of the Expedition will be committed to your care. I would strongly impress on your mind the importance of the strictest care and tenderness being exercised over these delicate instruments. On no account whatever must they be allowed to run down, as one instance of neglect will completely neutralize all the previous labour in bringing them from England and frustrate the great object of the Government in presenting them to the Expedition.

3. You are required to make observations on Terrestrial magnetism at different points and on different days at the station. You will also make use of certain Meteorological instruments and carefully note the results for comparison with other observations at a distance.

4. You are hereby authorized to purchase with some calico furnished to the Expedition as much buaze as can be procured, with a view to developing the trade in that article, and also whatever cotton may be offered for sale, in order to foster the growth of that tissue.

5. As it is possible that you may remain at Tete while the luggage is conveyed up to the Kafue, you may have ample time to get your photographic apparatus into operation. You will endeavour to secure characteristic specimens of the different tribes residing in, or visiting Tete, for the purposes of Ethnology. Do not choose the ugliest but, (as among ourselves) the better class of natives who are believed to be characteristic of the race, companies of Banyai and other strangers who may be induced to sit for payment; and, if possible, get men, women and children grouped together. Specimens of remarkable trees, plants, grain or fruits and animals may be taken, if opportunity offers, and so may the scenery around Tete,

¹ *Marginal note* : A true copy / Charles Livingstone.

but you must bear in mind that all other things are to be subordinate to the imperative duty pointed out in No. 2 paragraph.

6. Finally you are strictly enjoined to take the greatest care of your health. In the event of my failing to conduct the Expedition Captain Bedingfeld will take charge. If he, too, fails it will devolve on Dr Kirk and then on you. Trusting that you will be a distinguished pioneer in the great work of African civilization and rejoicing in being associated with you in this noble work, I heartily commit you to the safe keeping of the Almighty Disposer of events.

I am etc.,

DAVID LIVINGSTONE

A copy of the original Instructions of Her Majesty's Government is at your disposal, if you wish to consult it.

D.L.

David Livingstone to Richard Thornton

STEAMER *Pearl* AT SEA.¹
16 [*word illegible*]² 1858

Richard Thornton Esq.

DEAR SIR

1. The main objects of the Expedition to which you are appointed Geologist are to extend the knowledge already attained of the Geography and Mineral and Agricultural resources of Eastern and Central Africa.

2. As mining Geologist you are specially charged with the duty of collecting accurate information respecting the mineral resources of the country through which we are to travel and you are required to furnish me with reports thereon, and on the geology generally of the parts visited, for the information of Her Majesty's Government.

Taking for your guidance the hints furnished by Sir Roderick Murchison, you will carefully examine those parts of the country which may be pointed out to you as capable of being visited without risk to your person or health. Specimens of the fossils that may be found must always be brought away as evidence of the conclusions

¹ *Marginal note* : A true copy of / Instructions to / Richard Thornton Esq / Charles Livingstone.

² Perhaps '16th April'.

to which you have arrived respecting the age and relations of the different deposits, and drawings will be made by Mr Baines for the general collection of the Expedition.

3. The Expedition will proceed as quickly as possible through the lower portion of the Zambesi, and the efforts of every member will probably be required to facilitate the transit of the luggage to Tett[e]. While there you will have an opportunity of examining the seams of coal which crop out in the rivulets Moatize, etc., etc., a few miles to the North Eastward of Tett[e]. And you will spare no pains in reaching a sufficient depth from the surface to enable you to form an opinion as to the quality of the mineral where it has not been subjected to the influence of atmospheric agencies, as, should serviceable coal be found at this spot (which may be considered the limit of the comparatively deep water navigation of the river) it would be far more valuable than elsewhere, and its discovery will well repay the time devoted to a careful search for it.

4. Having ascended to some eligible spot beyond the confluence of the Kafue and Zambesi the iron house will be erected and experiments in Agriculture will be set on foot, partly with a view to promoting the health and comfort of the Expedition and, still more, in order to ascertain the agricultural capabilities of the country. Whatever knowledge of soils you may possess will now prove of great value and you are expected to communicate it freely for our guidance. . . .

9. I hand you the Appendices Nos 1 and 2 for your information in order that, should any useful plant or new animal come under your observation while engaged in your other duties, you may communicate with the head of the Expedition.

While it will be necessary to employ our firearms to procure supplies of food and in order to secure specimens of animals and birds for the purposes of Natural history, the wanton destruction of animal life must be carefully avoided, and in no case must a beast be put to death unless some good end is to be answered thereby.

10. Finally you are strictly enjoined to take the greatest care of your health. Avoid all exposure to night exhalation and, should you be troubled with drowsiness, constipation or shivering, apply promptly to Dr Kirk for medical advice. Trusting that our Heavenly Father will watch over you and that you will return to your friends after having performed your duty with honour, I hereby commit you to the care of over-ruling Providence.

I am your most obedient servant

DAVID LIVINGSTONE

David Livingstone to Thomas Baines

SCREW STEAMER *Pearl* AT SEA.¹

18th April, 1858

Mr Thomas Baines

SIR

The main object of the Expedition to which you are appointed Artist and Storekeeper is to extend the knowledge which we have already attained of the Geography and mineral and agricultural resources of Eastern and Central Africa. . . .

2. As Artist of the Expedition you are required to make faithful representations of the general features of the country through which we shall pass in sketches of those points which you may consider to be characteristic of the scenery. You will also endeavour to make drawing of wild animals and birds, copying as closely as you can the natural attitudes. We shall probably see the large wild animals in circumstances more favourable than has ever fallen to the lot of an Artist before, and such as few others will enjoy, for by the introduction of guns they will soon be rendered wild or entirely swept away. You are expected also to delineate for the general collection of the Expedition the specimens of useful and rare plants, fossils and reptiles, that may be submitted to you as a means of preserving pictorial records of things which through the influence of the climate may otherwise be lost. I have pleasure in handing you Appendices Nos 1 and 2, in order to show you some of the plants and animals to which your attention will be directed and which, if drawn as seen alive, will be all the more valuable. You are required also to draw average specimens of the different tribes we may meet with, for the purposes of Ethnology and, should it be possible to give the dimensions of the heads of the individuals you may select, the measurements will be highly prized. The comelier countenances should be selected rather than the uglier, as the former are always taken as the types of the European race.

3. From your own great experience as a traveller you will be able to render important service to the Expedition by directing the proper expenditure of the stores. You will understand that the provisions, eked out by what we can get in the country, are intended to last for two years. The goods we carry out with us are to serve as presents for the purchase of food and in order to foster, if possible,

¹ *Marginal note* : Copy of / Instructions for the / Artist and Storekeeper / , Mr Thomas Baines / Charles Livingstone.

a trade in cotton, buaze, beeswax or other raw material. A portion must also be reserved for our explorations to the North.

4. . . . Having arrived at Tete you will, in conjunction with Mr Livingston,¹ make those magnetical and meteorological observations which are expected of the Expedition at that station. A repetition of the observations on different days and at different points will give you more dependable results than if the observations be single and on one spot.

5. As we shall be a few days at the Cape, it may be well for you to take a complete set of magnetical observations at the Cape Observatory and receive any instructions that Mr Maclear may suggest. A single hint may be valuable. . . .

8. It is earnestly hoped that no occasion will ever arise in which it will be necessary for us to use our firearms for protection from the natives. The best security from attack will be so to act as not to deserve it and let the natives see that you are well prepared to meet attack. . . .

11. Finally you are enjoined to take the greatest care of your health and when you feel drowsiness, shiverings or constipation, apply at once for Medical aid to Dr Kirk and may the Almighty preserve you so that you may return home with honour.

I am, etc

DAVID LIVINGSTONE

¹ So in the original.

Bibliography

- COUPLAND, SIR REGINALD. *Kirk on the Zambesi, A Chapter of African History*. Clarendon Press, 1928.
- CHAMBERLIN, DAVID. *Some Letters of David Livingstone*. Oxford Press, 1940.
- DEBENHAM, FRANK. *The Way to Ilala. David Livingstone's Pilgrimage*. Longmans, 1955.
- DEVEREUX, W. COPE. *A Cruise in the 'Gorgon'*. London, 1869.
- HALCROW. *The Shiré Valley Project, A Report on the Control and Development of Lake Nyasa and of the Shiré River: by Sir William Halcrow and Partners*. Two volumes, September, 1954.
- LIVINGSTONE, DAVID. *Missionary Travels and Researches*. London, 1857.
- *Narrative of an Expedition to the Zambesi and its Tributaries; and of the Discovery of the Lakes Shirwa and Nyassa*, by David and Charles Livingstone. London, 1865.
- MACNAIR, JAMES I. *Livingstone the Liberator*. London, 1940.
- WALLIS, J. P. R. *The Matabele Mission* (Oppenheimer Series, No. 2). London, 1945.
- *The Zambesi Journal of James Stewart* (Oppenheimer Series, No. 6). London, 1952.
- *Thomas Baines of King's Lynn*. London, 1941.

Index

- ABADOO, 226
 Aberdeen, xix
 Abisa (Awisa), 195, 198
 Account Books, vii
 Adams, 228
 Aden, 385, 387
 Admiralty, 14 n 2, 21, 26, 28, 357
 Lords Commissioners of, 110, 380
 Agulansonga, village, 123
 Ajawa, 190, 192, 193, 231, 235, 236,
 237, 369
 attack and plunder villages, 182, 183-
 184, 230, 236, 240, 401-2
 encounter with, 184
 expelled from the Makololo, 236
 fugitives from, 192, 193, 213
 town burned, 409-10
 urged to capture the Manganja, 407
 woman shot by, 237, 238
 Akomosanje, 184
 Albert River, xxviii
 Algeria, 158
 Algoa Bay, 6
 Alington, Mr, 241, 242
 Aliwal North, 377-8
 Allan, Mrs, 261
 Alligators, 31, 32, 45, 61, 65, 68, 82, 86
 and n 2, 103, 124, 156, 199, 295,
 316, 362
 are not troublesome, 407
 women taken off by, 82, 83, 88
 Alps, 134
 Alves, José Antonio, 106, 261
 Ambo, 92
 America, South, 47
 Amguru, 319
 Anderson's College, xlv n 1
 Angola, xv, xvi, xviii, 141, 261, 308, 317,
 339
 Angonshe (Angonzhe) River, 141, 158
 Angosta River, 342
 Anna Bonna Island, 3
 Anna, Sr, 87, 103-4
 Antelopes, 44, 134, 141, 227
 of the hills, plains and marshy places, 253
 Ants, 74, 97, 124
 Arabs, xii, 98, 199, 209, 210, 301, 305,
 317, 358, 373, 375, 392, 394, 404
 Archer, Dr, 126
 Arctic, 49 n 2
 Argyll, Duke of, 126
 Ariel, H.M.S., 383, 384
 Arthur's Seat, 41
 Artificial horizon, 26, 27, 280
 Ashton, William, 367 and n 2
Asthmatic, see *MaRobert*
 Attorney General's Draft, 5 n 1
 Augusto, 84
 Australian Expedition, xxviii, 336
 Azevedo, Mr, 9, 11, 15, 30, 33, 34, 48,
 103, 127, 139, 152, 289 and n 2
 death of, 177
 house plundered, 15

B. and F. M. Review, 59
 Babisa, 141, 194, 198
 Bacuama, 105
 Badema, 67, 74, 295
 Bagoba, 253
 Baines, Thomas, vii, xiii n, xxvi, xxvii-
 xxviii, xxxvii-xxxviii, xl, xlii, xliii,
 4, 29, 31 ff., 36, 37, 44, 45, 55, 59
 and n 2, 62, 65, 72, 82, 83, 85-6,
 116 and n 2, 126, 132-4, 144, 150,
 281, 301, 338
 achievements of, xxviii
 death of, xxxviii
 dismissal of, 118, 138, 337
 expresses sorrow and willingness to
 pay, 114, 134, 325
 fraudulent activities of, xxxviii, 109,
 115, 117, 118-9, 132-4, 325,
 336-7
 illness of, xxxvii-xxxviii, xl, 31, 57,
 59, 82, 114, 302, 311, 320,
 325
 instructed not to paint Portuguese, 114,
 115, 133, 138, 325
 journal of, 327
 leaves on the *Lynx*, 139, 140, 337
 Letter of Instruction to, 434-5
 letters from D. L., 115-6, 118-9
 reports of his death, 127 and n
 salary stopped, 118, 325, 336
 Shifts and Expedients of Camp Life,
 xxviii n

- sketches and paintings of, xxviii, xxxvii, lv, 5, 36, 44, 63, 65, 67, 72, 74, 85, 114, 132, 136, 271, 293 *n* 1, 294 *n* 1, 299, 433, 434
 threatened with dismissal, 115
 Bajana, 99, 100, 246, 319, 349
 Bakora, 253
 Baldwin, Mr, 259
 Balebandela, 97
 Balenye, 390
 Balonda, 320
 Bamangwato, 4
 Bamapala, 155
 Bamboo, 95, 100, 209, 372
 Bame, 390
 Banajoa, 396
 Bandari Rock, 44, 57, 86, 109, 175
 Bangue Pass, 187
 Banimiseko (Panoreba) Cataract, 99
 Bann, 163, 164, 283, 297
 Banyai, 61, 65, 69, 82, 152, 295 and *n*, 431
 Baobab tree, 44, 71, 96, 176, 232, 384
 description of, 44
 Baramuana (Boramwana) Hill, 54-5
 Barbosa, Mr, 57
 Barkly, Sir Henry, 5 *n* 1
 Barometer, 59, 74, 75, 173, 191, 260, 303, 315, 398
 Barotse, Highlands, l, lii
 tribe, 44, 54, 257
 Barotseland, xvi
Barotseland Journal of James Stevenson-Hamilton, The, xxxv and *n*
 Barth, Dr Heinrich, 265 and *n*
 Baruiistas, 82
 Basenga, 253
 Basimilongue, 174
 Batahala, 253
 Batinje, liv
 Batoka, xxxi, 155, 172, 176, 256, 257, 261, 391, 396
 Batoum, 117
 Baxter, Richard, liv
 Bazizula, 74, 86
 Bazuru Island, 334
 Bazuzulas, 54
 Bebubue, *see* Rebubue
 Bechuana, xxxii, 243
 Bechuanaland, vii, 160
 Bedingfeld, Commander Norman B., xxvii, xxix, xxxvi, 4, 16, 17 and *n*, 18 and *n*, 19, 20, 26, 29, 31, 33, 34, 43, 45, 46, 47, 59, 85, 105, 106, 109, 115, 134, 153, 164, 180, 267, 269, 271, 290, 297, 370 and *n* 1, 418, 419, 424, 432
 dismissal of, xxxvi, 13 ff., 24 ff.
 disturbs the harmony of the ship, 12, 272 ff.
 D. L.'s opinion of character of, 135-6
 enjoys good health, 270
 in encounter with rebels, 153
 is allowed to stay, 16, 272
 Letter of Instruction to, 413-7
 letters to D. L., 12-13, 17, 21-4, 25-6, 26-7
 protests against harsh treatment, 34, 273 ff.
 resignation of, 13, 24, 25 ff., 34, 129-130, 272, 290
 Bees, 96, 103, 156, 161, 232, 375
 Béivé Island, 91
 Bemba, Lake, l
 Ben Habib ben Salem Lafifi, 210, 258 and *n* 3, 261, 394
 Bengalla, 151
 Benguella, 259, 260, 261, 392
 Benje Island, 197
 Berkeley, Captain, 46, 47, 84, 128, 139, 140, 288 *n* 2, 290, 326, 350
 Bichane, 48
 Binda, 195
 Birkenhead, xxviii, 298
 Birmingham, xxvi, 150
 Biscay, Bay of, 1
 Blaikie, Dr William Garden, vii
 Blair, 239
 Blantyre (Nyasaland), lii
 Blantyre (Scotland), li
 Boarouka Island, 258 *n*
 Boazuru Island, 194
 Boers, xi, xiii, xxii, xxix, 222, 252, 340, 357, 392
 Bokulanga, 256
 Bolea River, 256
 Bombay, xvii, xix, li, 117, 162, 226, 324, 346, 354, 369, 385
 D. L.'s voyage to, li, 385
 Bonga (Nyande), xliii, 16, 38 and *n*, 39, 40, 42, 50, 51, 58-9, 63, 81, 88, 109, 116, 166, 188
 in a great fright, 41
 natives killed by, 40, 42, 43, 59, 63

- Bonifacio, Jão, 49
 Boroma's village, 253
 Bororo Point, 34, 104, 122
 Boscauwen, 110
 Botelho, 116
 Botletle (Zouga) River, xiii, 214 *n*
 Bourbon, 48, 84, 86, 141, 162, 306, 346, 348, 349
 Governor of, 159, 348
 Bowen, Bishop John, 2 and *n* 2, 331
 Bradford, xxvi, 237
 Bradshaw, Mr, 2
 Braithwaite, Anna, 153
 Braithwaite, B., 104, 153, 278 *n* 1
 Bridges, 155
 Brisk, H.M.S., 148, 155
 British, Association, xxv, liv, 299 *n* 1
 Commerce, 380
 Museum, 106, 326, 427 *n*, 428
 Bruce, Colonel A. L., vii
 Bruce, Miss D. L., vii
 Bruce, Mrs Agnes, vii
 Bua River, 197
 Buaze, 62, 82, 90, 104, 119, 128, 146, 147, 171, 173, 252, 258, 307, 322, 324, 325-6, 414, 420, 421, 431, 435
 commercial value of, 322-3
 Buchanan, Professor, 126
 Buffaloes, 7, 56, 62, 79, 82, 140, 141, 169, 172, 173, 191, 202, 235, 251, 255, 256, 386
 vast herds of, 399
 Burlton, 370
 Burrup, Mr, 242, 365
 death of, xlvii, 365, 366
 illness of, 242
 performs wonderful feat, 365, 366
 Burrup, Mrs, xlvii, 222-3, 364, 366, 367
 Burton, Richard, xvii *n* 1, xxiii, 49 and *n* 1, 321, 347, 350, 379
 Bushmen, xxi, 75, 155

 CABBAGE ISLAND, 121
 Caffreland, xxi, 356
 Caffres, 205, 321, 335, 340, 405
 Cahoutchouc, 30
 Cairo, 332
 Calcutta Botanic Garden, 326
 Calico, 170, 179, 189, 213, 219, 222, 242, 255, 285, 295, 357, 372, 373, 402, 406, 431
 Cambridge, xxix, 350
 Cambridge Chronicle, Supplement, xxix *n* 1
 Canary Islands, 1 *n* 3
 Candido, Sr, 162, 167, 182, 250-1, 317
 discovers a lake, 339
 Cannibals, 67
 Cape Colony, xvi, 4 *n* 4, 8, 131, 356, 357, 377, 390
 Cape of Good Hope, vii, xv, xvii, xxxi, xxxii, 3, 5 and *n* 1, 21, 24, 25, 100, 103, 109, 126, 132, 136, 150, 157, 233, 234, 248, 249, 264, 270, 271, 289, 325, 326, 332, 344, 353, 369, 370, 376, 380, 382, 384, 391, 392, 396, 409, 435
 D. L. arrives at, 4
 Governor of, 27, 28, 227, 241, 266, 281, 351, 376 *n* 3, 381, *see also* Grey, Sir George
 Cape Town, xiv, xxxv, xxxviii, xlv, xlix, 4, 150, 266 *n*, 391
 Bishop of, 160, 350, 352, 360, 361, 366
 Capricorn, Tropic of, 4
 Carlisle, xvii
 Carroll, Lewis, 96 *n* 1
 Cartography, xiii, lv, 49, 74 *n* 2, 121
 Cassanje, 155
 Cassasil, 90 and *n* 1
 Castelão, Captain, 167, 250
 Caster, W., 138
 Cathcart, Sir George, treaty with the Boers, 357, 392
 Cazembe, 1, 162, 334
 Ceely, Mr, 59
 Central African Archives, vii, lv, lvi, 278 *n* 1
 Central African Federation, lii
 Ceylon, xxix, xxxiv, 16, 266, 269
 Chagonga, 89 *n* 2
 Chambamira Hill, 241
 Chamberlin, *Some Letters from David Livingstone*, xiv *n*
 Chambira, 246
 Chamimbe Rivulet, 200
 Chandala, 197
 Changanc, 254
 Chapman, Captain, 383
 Chapman, James, xxxviii
 Chareka, 109
 Charley, 205, 206, 235
 Chazika, 92
 Chemba Island, 176

- Chia River, 199
 Chibaba's, 180, 183, 246
 Chibébe, *see* Nyasa, Lake
 Chibisa, 81, 91 ff., 97, 114, 124, 182, 188, 192, 193, 230, 239, 315-6
 country devastated by his people, 230
 goes on expedition against Dafundata, 245
 killed by Mello, 229
 son of, 228, 229
 Chibisa Mission, liv
 D. L.'s comments on, 242-3
 Chibisa's, island, 317, 365
 village, xlvii, 80, 91 n 2, 92, 94, 124, 126, 127, 180, 181, 229, 235, 242, 245, 317, 365
 Chibumba, 257
 Chicova, 61, 64, 174, 294, 389, 390, 399, 421
 silver mine reported at, 151
 Chifonda, 255
 Chigunda, 183 ff.
 Chikamba, 207
 Chikwawa, xlvii, 91 n 2, *see also* Chibisa's village
 Chilonda's village, 255
 Chimbano, 203
 Chimbondo River, 101
 Chinapsa Rivulet, 65
 Chinde River, 10, 15
 Chingone's village, 194
 Chinkoba, 257
 Chintipe River, 100
 Chipata Hill, 199
 Chiradzura, 246, 248
 Chirebue, Mount, liv, 256, 391
 Chirembue, 192
 Chirimbo, 194
 Chiringa, River, 172
 Chiringoma, 82
 Chisaka, 62, 67, 69, 72, 92, 122
 attacks by, 92, 93, 166, 174
 death of, 92
 Chisanga, 207
 Chisindo Island, 91
 Chisonga, 245
 Chisote Lagoon, 210
 Chitanda, 198, 204
 Chitia, Lake, 217
 Chizunze, 101, 185, 246, 247 and n 1
 village of, 101, 180
 Chobe, Marshes, xiv, xxxi, xxxiii
 River, 259
 Cholera, 107, 144, 148
 Chronometers, 27, 31, 114, 163, 214, 280, 368, 377, 387, 398, 417, 431
 Chundu, 259
 Churadzuru, 186
 Clarendon, Earl of, xxiii, xxiv, xxvi, xxvii, 104, 126, 264 n, 301, 395, 400
 Clarendon Mountain, *see* Manguru Mountain
 Clark, 365
 Clark, Sir James, 309 and n, 324
 Clarke, 228
 Clementino (Clementina), Sr, xliii, 85, 149, 162, 163, 169, 237, 252
 Clyde, River, 40
 Cockroaches, 131, 147, 148, 151
 Coffee, Tom, 35, 37
 Coffee trees, 38, 159, 248, 287, 377, 378
 superstition attached to, 155, 287
 Colonial Office, 16, 275, 336
 Colt's revolver, 27
 Columba root, 30
 Comet observed, 49, 181 and n 3
Commercial Advertiser, 141
 Concessão, João de, 43
 Congo River, xxvii, 3, 296
 Convents, 43
 Cook, Mr, 46
 Cooke, R., 291 n 1, 292
 Copper, 65, 72, 210, 429
 Cotton, 2, 11, 37, 38, 39, 53, 59, 61, 71, 73, 75, 77, 81, 86-7, 93, 94, 96, 98, 100, 101, 120, 121, 185, 194, 202, 219, 233, 236, 238, 239, 240, 295, 300, 304, 305, 307, 318, 324, 334, 342, 348, 355, 377, 378, 386, 403, 415, 422, 426, 431, 435
 cultivated extensively, 333, 387, 396, 407-8
 prospects of free people cultivating, 285, 414
 seen in most native gardens, 285, 303
 slavery and cultivation of, 283, 355, 410, 420
 specimens of, sent home, 326
 Tonje, 240, 285
 trade ready for development, 322

- Coupland, Sir Reginald, *Kirk on the Zambesi*, xxvi, xxvii n 1, xxxviii n 1 and 2, xxxix and n 2, lv n, 85 n 4, 398 n
- Coutts and Co., Messrs, 150
- Coutts, Miss, 104, 126, 164
- Cow-itch pods, 171 and n, 205, 240, 252
- Crab (the dog), xliii and n
- Crab's Island, 37
- Crimean War, 51 n
- Crocodile, 231, 235
- Croker Island, xxviii
- Cuama, 105
- Cumming, Gordon, 131
- D'ATHOGUIA, VISCOUNT, 114
- da Cruz, Antonio José ('Coimbra'), 48-9, 84, 86, 103, 117, 156, 157-8, 159, 160, 306-7, 323-4, 342, 346, 348-9
account of his slave-trade activities, 348-9, 407
- da Gama, Vasco, xxiv
- da Silva, Custadio José, 112, 144, *see also* Quilimane, Governor of
- Dafundata, 245
- Dakanamoia, 92, 125, 134, 180, 182, 214, 215, 401
- Damaraland, xxxviii
- Dambo Island, 89, 208
- Danger Bay, 209
- Daniel's house, 149, 150, 162
- Davies, Captain, 363
- Davis, Tom, 44, 47
- de Almeida, João Soares, 111, *see also* Mosambique, Governor General of
- de Cassagnac, Granier, 143, 144 n 1
- de Cunha, Alexandrina, xvi
- De Hornsey, Captain, 155, 157
- de Roebuck, Mr, 140
- de Sá da Bandeira, Viscount, 30, 307
- Debenham, Professor Frank, *The Way to Ilala*, xliii, xxxviii n 2, lii n, 91 n 2, 171 n
- Decken, Baron von der, xxxvii
- Defue, village, 168
- Denman, Captain, 126
- Denman, Honble George, 126
- Desolation Island, xix
- Devereux, Assistant-Paymaster Cope, xxv
- Devereux, W. C., *A Cruise in the 'Gor-gon'*, xxvi, xxxvi n 1, xlvii and n 1
- Devil's Cataract, xxxv
- Dickinson, 228
- Dickson, Dr, 365
- Dickson, Mr, 150
- Doa, 182
- Donaldson, Captain, xiii
- Donna Margarita, Island of, 29, 32, 128
- Donna Seka, 146
- Doto River, 9-10, 11, 102, 268
- Dover's Powder, 33
- Dōwe fishes, description of, 142, 145
- Downing Street, 4 n 4
- Drew, Captain, 4
- Drought, 38, 87, 98, 227
- Dublin, xxv
- Duncan, Captain, 1, 5, 12, 14, 15-16, 18, 19 and n, 23, 27, 129, 130 n, 266, 273, 275, 276, 277, 278
letters to D. L., 19
- Dupratt, Mr, 147, 289, 345, 348
- Dupuch, M., 158
- Dysentery, 224, 229, 232, 233, 235, 237, 253, 366, 371
prevalence of, 368
treatment of, 234, 235
- Dzomba, Mount, *see* Zomba, Mount
- EBONY, 45, 55, 148, 160, 171, 173, 216, 217, 219, 228, 245, 286, 326, 372, 373, 375
- Eckhardt, Rev. Mr, 317
- Edinburgh, xxv, xxvii, 126, 167
- Egypt, 7, 172
- Eisdell, Miss, 385
- Elephant, 38, 40, 61, 62, 63, 69, 77, 79, 81, 88-9, 92, 101, 104-5, 106 and n 2, 117, 123, 124, 127, 160, 166, 170-1, 190, 191, 194, 202, 209, 211, 213, 239, 252, 254, 255, 256, 294, 295, 296, 302, 304, 326, 346, 386, 405
bones burned for fuel, 304
dimensions of, 170-1, 196, 256 n
encounter with, 78, 91
Instructions to the Zoologist concerning, 428
Marsh, 365, 401
vast herds of, 399
- Elwes, Mr, 126
- Endamoshule, 237

- England, xvii, xviii, xxi, xxv, xxxvi, xxxviii, 2, 13, 24, 25, 27, 28, 49, 51, 88, 126, 134, 140, 149, 226, 249, 261, 276, 279, 282, 300, 307, 308, 315, 321, 322, 345, 350, 356, 362, 363, 366, 378, 380, 394, 409, 413, 417, 419, 424, 431
 Church of, xlvi, 353
 English, xi, xiv, 10, 15, 16, 30, 34, 35, 41, 47, 72, 78, 96, 106, 140, 157, 166, 174, 175, 188, 190, 213, 216, 219, 223, 225, 229, 234, 241, 263, 269, 299, 319, 334, 341, 342, 343, 357, 361, 373, 382, 386, 391
 Ajawa enemies of, 410
 commerce, xxiv, 265, 342, 374, 375, 392
 cruisers dare not interfere with French slavers, 349
 high moral influence of, 308, 334
 Makololo have decided preference for, 393
 name, advantage of, 301
 name, honour and influence of, 347 and *n*, 358
 opposed to slave trade, 269, 307, 323
 subjects cut off by African fever, 388
 treated with respect by Makololo, 242
 Equator, xxi
 Europeans, xi, xii, 2, 206, 249, 271, 298, 317, 318, 344, 355, 360, 361, 397, 405
 cannot live and labour in the tropics, 331
 cut off by fever, 388
 first visit of, awakens suspicions, 300, 305
 free navigation of Zambezi of primary importance to, 341, 345
 healthy region well suited for, 313
 immunity to fever of, 314, 356, 391
 in same position as native squatters, 344
 moral influence of, 415-6, 419, 422
 Expedition (Nyaka) Island, xxxiv, xxxvii, 16, 18, 22 and *n* 2, 24, 25, 26, 27, 32-3, 46, 48, 80, 102, 120, 140, 147, 156, 278, 280
 FAMINE, xlviii, 144, 148
 country devastated by, 230
 Fernando Po, xlv
 Ferrão, Sr, 54, 55, 66, 73, 82, 87, 91, 106, 107, 122, 125, 176, 236, 241, 289
 illness of, 160
 Fever, xx, xxi, xxv, xxvi, xxxvi, xxxvii, xxxviii, xl, xli, xlvii, 33, 34, 39, 41, 55, 57, 62, 73, 82, 84, 87, 108, 114, 115, 121, 126, 131, 136, 152, 154, 160, 162, 167, 215, 219, 232, 247, 250, 260, 288, 320, 327, 336, 347, 348, 356, 364, 374, 407, 409, 413
 absence of, 75, 270, 310
 African, report on, 309-14, 324; and cure for, 393
 among Kroomen, 73, 298
 Europeans cut off by, 388
 irritability precedes an attack of, 359
 persons of wiry frames less liable to, 356-7
 powder, composition of, 393
 prevails, 302, 368
 preventatives, 6, 51, 52, 73, 147, 163, 287-8, 420, 424
 symptoms, 311, 359
 treatment of, 311-2, 360, 388, 393
 Fitch, Frederick, xxxix *n* 3, 126, 216
 Fitch, Mrs, 155
 Fitzgerald, Seymour, xxvii *n* 2
 Flagstaff Island, 179
 Fletcher, Miss Irene M., lv
 Fletcher, Samuel, 126
 Flood, xlv, 88, 160, 223
 Foreign Office, 1, 16, 26, 28, 234, 264 *n*, 275, 281, 309, 326, 351, 354, 370, 379, 381, 393, 414, 421
 Forster, Mr Le Neve, 153
 Fort Dromfort, 387
 France, 144, 346, 375
 Francisco, Sr, 49, 54, 81, 84, 307
 Franklin, Lady, 49 and *n* 2
 Franklin, Sir John, 49 *n* 2
 Free Kirk, xlv, 367
 French, 49, 134, 346, 348
 Alliance, 134
 Emigration Scheme, 48, 156, 157, 270, 307, 308, 323, 342, 348-9
 plantations, 349
 Frere, Sir Bartle, li, 386
 Frolic, H.M.S., xviii
 Fulas, 206
 GABRIEL Esq., 394

- Gaika, xxviii
 Galdino, Sr, 30, 49, 151, 152-3, 233, 234
 Gamba, 78, 81, 90
 Garden Island, 396
 Gardner, Captain, 217, 219, 220, 387
 Gedye (Geddey), Mr, 180, 182, 187
 Generoso, 115, 116, 118, 132, 162
 George, xiii
 German, confederation, 134
 emigration, 107
 Society of Colonization, 323, 339 *n* 1, 343, 346
 Glasgow, xxv, 126, 326, 331, 344, 357, 358, 361, 378
 Goa, xix, 114, 122, 400
 Gobudu, 93, 94, 114
 Goderich, Viscount, 104 and *n* 1, 126
 Gold, 87, 150, 121
 Gomes, Sr Manoel, 63
 Gordon, Captain, 5, 6, 7, 9, 10-11, 15, 16, 19, 20, 22, 23, 28, 128-9, 266, 267, 268, 269, 272, 275, 301, 327
 letters from D. L., 129-30
 letters to D. L., 20-1
 Goree, *see* Slave-stick
 Gorgon, H.M.S., xlvii, xlviii, 221, 224, 362, 363, 364, 366, 368, 369, 370, 376 and *n* 1
 Gorongozo, 52, 54
 Govea, Sr, 162
 Government, Her Majesty's, 4, 14 *n* 2, 24, 27, 28, 49, 106, 109-10, 113, 118, 129, 130, 177, 249, 264, 265, 266, 272, 274, 276, 281, 295, 297, 301, 306, 314, 323, 342, 343, 350, 371, 379 ff., 388, 413, 414, 415, 417, 419, 431, 432
 Ceylon, 266
 Expedition of 1841, 121
 Grass-burning, 35, 38, 86, 124, 187, 207, 224, 227, 240, 245, 285
 account of, 45
 Gray, Bishop Robert, xxxv, xlvii, xlix and *n* 3
 Great Britain, xxiv
 Great Fish Bay, 3
 Grecian, H.M.S., liii, 9
 Greece, 156 *n*
 Gregory, A. C., xxviii, 336
 Grey, Admiral Sir Frederick, 84, 85, 104, 110-11, 299, 337, 339
 letters from D. L., 157-8
 letters to D. L., 110
 Grey, Earl, 5 *n* 1, 126
 Grey, Sir George, 4 and *n* 4, 105, 126, 160, 283, 290, 326, 351, 376 and *n* 3, 386
 Griquatown, 4

 HALIFAX, xxvi, 126
 Hardesty, Mr, 180, 187
 Hart, Mr, 46
 Hastings, Lady Flora, 309 *n*
 Helmore, Mr and Mrs, 258
 Henslow, John Stevens, 271 *n* 1
Hermes, H.M.S., xxviii, 5-6, 7, 8 f., 10, 14, 16, 17, 20, 22, 128, 266, 267, 268, 269, 272, 276
 absence of fever among men of, 270, 310
Hetty Ellen, xlvii
 Hibiscus, 11
 Hill, Colonel Stephen John, 1 and *n* 5, 2, 274
 Hiller, V. W., O.B.E., lvi
 Hippopotami, 7, 31, 32, 46-7, 49, 61, 68, 75, 76, 78, 79, 103, 120, 123, 141, 152, 156, 174, 179, 190, 192, 196, 209, 210, 213 and *n*, 216, 251, 254, 294, 295, 299, 405
 become quite wary, 241
 encounter with, 216
 fruit trees devoured by, 397
 measurements of, 66-7, 175, 209
 pure white one observed, 399
 rivers abound in, 304, 316
 traps, 76-7, 78, 81, 124, 189, 245
 Holmes, Captain, 153
 Hoogly River, 331
 Hooker, Joseph D., Principal duties of the Botanist, 421, 425 *n*, 427
 Hooker, Sir William Jackson, 214, 271 and *n* 1, 347
 Hopetown, 4
 Horsfall, J. B., 126
 Hoskins, Lieutenant, 6, 267, 326, 327, 413
 Hottentots, 92, 243
 Hutchins, 123, 127, 151, 155, 186
 Hydrographic Office, 188

 IBOC SLAVE TRADE, 207, 404, 406
 Iguano, 31

- India, *xlix*, 85, 119, 322, 326, 384, 385, 408, 425
 Agricultural and Horticultural Society of, 57
 Indian, Archipelago, *xviii*
 Government, 326
 hemp, 260, 304, 335
 Ocean, 268, 387
 Indigo, 2, 30, 37, 38, 83, 324, 329, 348, 356, 426
 abundance of, 257, 307
 Insects, 6, 62, 64, 79, 83, 138-9, 206, 208, 326, 422
 Inyati, *x*, 227 *n*
 Ireland, 145
 Irish, 5 *n* 1
 Isidore, Sr, 74, 151, 176, 289
 medical assistance asked for, 229-30
 reported death of, 233, 236
 Isonga, 210
 Italy, 21, 127
 Ivory, *xx*, 49, 57, 73, 74, 77, 105, 106, 117, 122, 141, 146, 164, 183, 194, 195, 199, 200, 210, 236, 241, 257, 259, 261, 304, 318, 319, 322, 334, 342, 345, 392, 394, 400, 414, 420
 Instructions to the Zoologist concerning, 428
 the only export from the Zambezi, 346
- JESUITS, 157
 João, Sr, 142, 163, 205
 Johanna, *xlvi*, 179, 214, 215, 216, 217, 220, 221, 226, 233, 290, 370, 374, 376 and *n* 2, 384
 account of voyage to, 214-5, 225-6
 King of, 226
 men, 226, 229, 231, 232, 233, 241
 ox, 233
 Johnston, Sir William, 126
 José, Sr, 65, 66 *ff.*, 72, 73
 Juba, 387
 Judea, 95 and *n* 2, 96
 Jumbo, Tom, 8, 55, 64
 heroic act of, 35
 Jura, 60
- KA BEMBA RIVER, 210
 Kabadzo River, 170, 252
 Kabango, 197
 Kabembe Rivulet, 256
 Kabranhenga Hill, 41
 Kachiso, 247
 Kadampi, 147
 Kaffir, *lv*
 Kafue River, *xxxi*, *xxxiii*, *xxxiv*, *xxxvii*, *xliii*, 4, 132, 307, 390, 395, 412, 415, 421, 431, 433
 prodigious number of animals in region of, 399
 Kaia, 122
 Kaimbe Island, 162
 Kaingua, 184
 Kakolole Rocks, 253
 Kakotene, 246
 Kalahari Desert, *xiii*, *xxix*, *xxx*, *xxxiii*
 Kalomo, 257
 Kalonjere, 192-3, 213, 246
 Kalunga, 92
 Kambele, 193
 Kambera, village, 169
 Kampoto, 195
 Kanamise, 48
 Kangkanje's, 247
 Kangoimba, 92
 Kangomba, 41
 Kangombe, 246
 Kankokue's, 79
 Kansalo Rapids, 389-90, 398
 Kanyata, *xxii*, 62, 72, 83, 165
 Kaombe River, 200, 201, 209-10
 Kaorabasa, *see* Kebrabasa
 Kapande's village, 124
 Kapechira Falls, 188
 Kapene, 246
 Kaporros, *see* Slavery
 Kaposhe Rivulet, 66
 Kapuita, 81, 92
 Kapuiti's village, 188
 Karamanomano Hill, 41
 Karembe, 170, 252
 Kari Hill, 65
 Kariba, *xxxv*, 389, 398
 Kariva, 163
 Karoara Hill, 161
 Kasoeia Island, 40
 Kataimbia Cataract, 191
 Katalosa, 61
 Katanga, 210
 Katrina River, 11, 32, 48
 Katura, 182
 Kavra misa Hill, 37
 Kavuma, 96, 97-8
 village, 96, 190

- Kazeruka Island, 258 *n*
 Kebrabasa Gorge, xxxiv, 60, 168, 173
 Kebrabasa Rapids, xiv, xxxi, xl, l, 51, 52, 54, 56, 59-60, 62, 63-4, 65, 80, 82, 270, 271, 286, 301, 321, 328, 338, 354, 373, 389, 390, 399, 415, 421
 description of, 60, 292-4
 D. L. is unaffected by the horrors of, 412
 flood of Zambezi not sufficient to smooth over, 359
 most of the river above, examined, 387
 powerful steamer could ascend, 353
 tsetse infests river above, 358
 Kebramisa, 107
 Keppel, Mr, 368
 Kevramusa, 176
 Kew Gardens, 271 *n* 1, 425, 427
 Khotakota, 201
 Kilimanjaro, Mount, xxxvii, 370
 Kilwa, *see* Quiloa
 Kinnaird, Lord, 104, 126
 Kirk, Dr John, xxvi, xxvii, xxxii, xxxv, xxxvi, xxxvii, xxxviii, xxxix, xli, xlvii, xlviii, l, li and *n* 2, lv and *n* 2, 4, 25, 26, 29, 30, 32, 34, 45, 46, 50, 51 and *n*, 54 ff., 82, 83, 85 and *n* 2, 90, 91, 93, 95, 96, 102, 107, 109 ff., 120, 126, 132 and *n* 2, 133, 134, 136, 138, 140, 146, 147, 149 ff., 155, 162, 174, 176, 179, 180, 183, 187, 188, 190, 199, 204, 207, 216, 220, 228, 234 ff., 254, 255, 257, 260, 273, 277, 280, 281, 286 *n* 2, 293, 294, 296, 307, 308, 315, 318, 320, 323, 325, 335 ff., 348, 366 ff., 391, 393, 395, 396, 401, 402, 417, 419, 432, 433
 affirms Bedingfeld's conduct, 278 and *n* 2, 279, 282
 barely survives a grisly journey, xlvii
 becomes second in command, 308
 botanical specimens of, 347
 diary of, 398 *n*
 enjoys good health, 298, 302, 320
 finds pepper growing wild, 333
 illness of, 114, 125, 134, 137, 154, 162, 166-7, 230, 231, 233, 250, 388
 is permitted to retire, 233
 is thanked for services rendered, 110-111, 289
 Letter of Instruction to, 420-8
 letters to D. L., 278-9
 loyally stays on, xlviii, 376 *n* 2
 obtains poison used for arrows, 90, 93
 paper on fever, 108, 309-14, 324
 reports on the Shiré expedition, 300, 302-5
 returns home, xlix, 235, 376 and *n* 2
 sketches and drawings of, 293 *n* 2, 299
 stung by hornets, 103
 valuable assistance of, 291
 Kisaka, 42, 43
 Kisio tree, 37
 Kolobeng, xi, xiii, xxi, xxxi, xxxii, 162, 222, 356
 Komasa, 206
 Komosito's village, 100
 Konde River, 246
 Kondidzoa Rapid, 65, 66
 Kondowe, 207
 Konfunda Hill, 191
 Kongone (Congone), xlv, liv, 45, 80, 85, 102, 150, 159, 164, 214, 227, 336, 360, 361, 370, 371, 378
 Bar, 17, 20, 21, 126, 151, 276
 Canal, 9, 20, 138, 140, 156, 383
 Harbour, 46, 120, 128, 139, 140, 157, 321, 332, 337, 339, 340, 350, 351, 362, 371
 Island, 120
 River, 11-12, 30, 32, 33, 47-8, 73, 84, 101, 119, 128, 151, 155, 249, 268, 270, 278, 279, 283, 288, 289, 290, 291, 299, 300, 321, 322, 325, 326, 337, 342, 354, 389
 Kowirwe, Mountain, 201, 203, 208
 Kroomen, 2, 3 and *n* 2, 8, 25, 26, 27, 31, 32, 33, 36, 45, 47, 49, 56, 105, 123, 124, 135, 153, 274, 275, 277, 279, 302, 305 *n* 3, 310, 330, 415 and *n*
 advances in money and goods to, 133 *n* 1
 disciplined Europeans much better than, 344
 liability to fever of, 73, 298, 314, 356
 not worth their food, 105, 106
 sent away to Sierra Leone, 119, 325
 useless on land journeys, 325
 Kroo town, 2
 Kuakampiri Hill, 253
 Kuenane, 262

- Kuruman, xxxii, 3, 4, 128, 227, 236, 354, 358, 367 and *n* 2
 Kushishone, 57
 Kwetes, 56, 330-1
 greatest difficulty in Zambezi navigation, 331
- LABOUCHERE, Rt Hon. Henry, liii
 Lady Grey Cape, 6
 Lady Nyassa, xxxv, xlvii, xlviii, xlix, li, 215, 219, 228, 229, 231, 232, 370, 383, 384
 an admirable ship, 378-9
 does wonderfully well, 383
 goes aground, 229, 230-1
 is left at Bombay, li, 386
 pipes burned, 242
 Laird and Oldfields Expedition, 121
 Laird, Macgregor, xxviii, xxxiv, 2 *n* 1, 37, 120, 122, 140, 297-8, 324, 330, 333
 The Narrative of an Expedition into the Interior of Africa, 1837, 2 *n* 1, 328 *n*
 Lanark, 104
 Landeens, xliii, 34, 40, 45, 46, 54, 55, 82, 104, 263 *n*
 act as soldiers, 35
 and slavery, 34, 285
 people fleeing from, 159
 tribute paid to, 73, 160, 263
 village industry, 55
 Langue River, 99
 Lanjea, 123
 Lavradio, Count de, xxiv, xxvi, liii, 302
 Lebanon, 51
 Lebeole, 260
 Leeds, xxvi, liv
 Lekone Rivulet, 258, 259
 Lekukutu River, 247
 Leopard, 152 and *n*
 man killed by, 67
 sheep killed by, 234
 Leprosy, 186, 197, 237, 257
 seems common, 100, 197
 Lesungwe Rivulet, 239
 Levant, 51
 Library, vii
 Licungos, 49
 Liende River, 211, 219, 223, 373, 375
 Lignum vitae, 171, 173, 286, 326, 329, 363
 Lilandi, Mount, 189
 Limpopo River, xxviii
 Lincolnshire, 167
 Lintipe, 211
 Linyanti, xiv, 258, 259, 261, 351, 366, 392, 394, 400, 401
 great hunger at, 257
 missionary party to, 260, 359, 388, 393
 swamps of, 391
 Lions, 254
 Lip rings, 76, 77, 79, 88 and *n* 2, 90, 96, 101, 196, 220-1, 304, 319
 sketch of, 220
 Lisboa, 85
 Lisbon, xxiv, xxv, xxvi, xxix, li, 109, 224, 288, 289 *n* 1, 341, 342, 346, 348, 349, 350, 352, 384
 Lister, Joseph, xxvii
 Liverpool, xxvi, 7, 384
 Livingstone sails from, 1
 Livingstone, Agnes, xxxii and *n* 2, li, 126, 153, 214, 215, 216, 220, 224, 382
 Livingstone, Anna Mary, 215, 385
 birth of, 128 and *n*
 Livingstone, Charles (the 'Moral Agent'), xii, xxiv, xxv, xxvi, xxvii, xxxvi, xxxvii, xxxix and *n* 3, xl ff., 1, 12 *n* 2, 14 *n* 1, 17 *n*, 18 *n*, 19 and *n*, 20 *n*, 21 *n*, 22 *n* 1, 25 *n*, 26 and *n*, 33, 34, 36, 57, 65, 82 and *n* 3, 83, 85 and *n* 2, 86, 110 and *n* 1, 114, 116, 120, 122, 127, 128, 129, 130, 133, 140, 147, 148, 152, 153, 163, 166, 174, 177 *n*, 180, 185, 186, 190, 195, 199, 204, 207, 209, 226, 234, 249, 254, 260, 276, 286 *n* 2, 294 *n* 2, 299, 300, 308, 321, 324, 325, 333, 335, 336, 338, 345, 348 and *n* 2, 362, 368, 387, 398, 412, 417, 419, 424, 425 and *n*, 427 *n*, 429 *n*, 431 *n*, 432 *n*, 434 *n*
 affirms Bedingfeld's conduct, 278 and *n* 2, 282
 becomes third in command, 308
 chronometers committed to care of, 431
 finds cotton growing, 11, 388
 idleness and inefficiency of, xlv, 164
 illness of, 39, 82, 84, 115, 125, 126, 131, 162, 233, 247, 250, 258, 302, 311, 320, 388
 Letter of Instruction to, 431-2
 letters of, 278

makes valuable collection of ornithology, 348
 returns home, xlv, xlix, 235
 secures a consulship, xlv
 seems intent on a row, 252-3
 source of much trouble, xxxix, xlii
 wishes to go home, 233, 252-3
 Livingstone, David
 accepts Bedingfeld's resignation, 272 ff.
 accused of cursing his brother Charles, 252-3
 agrees to let C. Livingstone go home, 233
 and the spreading of Christianity, 51, 53, 102, 108, 185, 198, 202, 220, 355, 360
 appointed consul at Quilimane, 264, 289
 Boers raid his house, xi, xlii, 222
 champions his Makololo, 230 and n, 240-1, 353, 392
 character of, ix ff., xxxiii, xlviii, 156 n
 comments on Chibisa Mission, 242-3
 consul to Senna and Tette, 263
 death of his wife, xlviii, 219, 221-2
 despairs of doing anything with the Portuguese, 299
 despatches of, 85, 107, 114, 119, 126, 127, 153, 175 n 1, 176, 258 n 2, 263 ff.
 diaries of, lii ff., 166 n, 175 n 1
 discusses cultivation of cotton, 285-6
 dismisses Bedingfeld, 14-15, 24 ff.
 enjoys good health, 298, 302, 320
 family of, xi, xiv, xxi, xxii, xxx-xxxi, xxxii, li, lii, 85, 163, 214 ff., 360, 364
 goes to see the Victoria Falls, 258 and n
 has great faith in quinine, 271
 hears of the arrival of Bishop Tozer, 241
 his bearing towards his officers, 412
 his boats attacked by natives, xlviii, 218, 222, 372, 375, 376, 402-3
 his fondness for walking, ix
 his industry, xii, xlviii, 74
 his opinion of Portuguese Governors, 323
 his passion for travel, xi
 his reception in England, xxii, xxiii ff., 63
 his trust in the Lord, 84-5, 108, 121, 237, 242, 377

Q

illness of, xv, xlviii-xlix, 62, 73, 125, 148, 182, 184, 234, 240, 247
 instructed not to take possession of discoveries in name of Government, 377, 378
 learns of the likelihood of a Universities Mission, xlv, 160, 350, 361
 letters of, xv, xviii, xxxiii, xxiv, xxix n 2, xxxii n 2, xxxvi n 3, xlv n n 3 and 4, xlviii n n 2 and 3, l n n 1 and 2, li n 1, lv, 84, 104, 109 ff., 263 ff.
 Letters of Instruction to his officers, 1, 411 ff.
 letters to Admiral Grey, 157
 letters to Baines, 115-6, 118-9
 letters to Bedingfeld, 14-15, 18, 24-5, 27-9
 letters to his children, 214 ff., 382-5
 letters to his mother, 215
 letters to José Nunes, 362-4
 letters to Lord Malmesbury, 263 ff.
 letters to Lord Russell, 340-51, 387 ff.
 letters to Maclear, 365-70, 374-7, 385-7
 letters to Murchison, 371-4, 377-9
 letters to secretaries of Oxford and Cambridge Mission, 351-62
 letters to Sir George Grey, 351
 letters to Thornton, 112-3, 149, 177
 Makololo await his return at Tette, 266, 271
 mischance meets him, xxxiii ff., 63
Missionary Travels and Researches, xxiii, xlv n, 131 n 1, 360
 moves towards a wider interpretation of 'missionary duty', xvii
 mourns the loss of his wife, 227, 376, 378
Narrative, xlv, 83 n 2, 88 n 2, 98 n 2, 138 n, 294 n 4, 295 n, 412
 navigates the *Lady Nyassa* to Bombay, li, 385, 387
 not in love with travelling on foot, 298
 notebooks of, xii, liii ff., 101 and n 1, 124 n 1, 205, 245
 observations on alligators, 31
 on colonization, 53, 120, 126-7, 131 n, 137, 307-8, 343
 on slavery and slave trade, 143, 144 n 1, 225, 283-5, 306-7, 332, 335, 342, 345-6, 347, 378, 384, 388-9

L.Z.E. II.

- on the effect of Christianity on the rights of women, 143
- on the uselessness of his brother Charles, 164
- on trade and trading, xviii ff., 219, 223, 249, 289, 332, 334, 342, 363, 378
- opinion of Bedingfeld's character, 135-136, 273 ff.
- passes a dreadful night, 383
- proposals for building steamers, 248-9, 270
- range of his interests, 156 n
- receives order of recall, xlix, 241, 380-1
- recommends work as a fever precaution, 52, 288, 313
- remarks on African fever, 309-14, 324; and cure for, 393
- rendered useless by heat for the first time, 125
- reports on the navigation of the Zambesi, 115, 324, 326-31, 339, 340 ff.
- reports unfavourably on Baines, 336-7
- reports unfavourably on Thornton, 325, 337-8
- requests increase in salary, 264-5, 379
- returns home, lii, 386-7
- rumours of his death, 384
- sails from Liverpool, xxx, 1, 263
- savours the bitterness of defeat, xlv, 1
- sketches of, 55, 58, 66, 73, 74 and n 2, 76, 79, 93 n 1, 98 n 2, 131, 137 n 1, 184, 190 and n, 192 and n 1, 199 n 1, 200, 202 n 1, 206 n, 208, 220, 221, 226 n, 247 n 1, 383, 384, 397
- suggestions for the extension of lawful commerce into the slave market, 343 ff.
- thinks about life hereafter, 376
- welcomed by Makololo, 42, 287
- works on Sundays, 277, 288
- Livingstone, Mrs David (Mary Moffat), xiv, xvii, xxii, xxx-xxxi, xxxii, xxxvi, xlviii, li, liii, 4 and n 1, 104, 128, 150, 153, 155, 160, 215, 227, 364, 368, 370, 391, 395
- daughter born to, 128 and n
- dies at Shupanga, xlviii, 219, 233
- lands at the Cape, 4
- sickness of, 3
- Livingstone, Janet, xlvi and n 1, 153, 227
- Livingstone, Robert, xxxv, 153, 155 and n, 216, 220, 384
- Livingstone, Thomas, l n 1, 153, 215, 217, 220, 225, 385
- Livingstone, William Oswell (Zouga), xxx, 214 and n, 217, 220, 225, 385
- Lizard, 73
- Loand (Loanda), xx, xxvii, xxx, 219, 261, 379, 394
- Loango River, xiv
- Loangua (Loangwa) River, 195, 197, 202, 206, 209, 253
- Lobengula, xxxviii
- Locust, 208
- Lohuma River, *see* Rovuma River
- Londa, 75, 101, 201, 203, 317, 320, 334
- London, xvii, xxi, xxiv, xxvi, xxxix, xliii, xlv, lii, 6, 28, 281, 329, 331, 351, 358, 373, 377
- Missionary Society, x, xvi, xvii, xx, xxi-xxii, xxiii, xxiv, lv, 156 n
- Lotofagi, 75
- Lotus roots, 75, 76, 202
- Louis Napoleon, 85, 127
- Luabo River, liii, 6, 8, 9, 11, 20, 32, 45, 46, 47-8, 54, 57, 80, 101, 102, 103, 110, 119, 121, 139, 140, 147, 162, 179, 223, 263, 266, 283, 288, 290, 322, 342, 345, 363, 378, 383, 413
- Luambadzi Rivulet, 203
- Luane River, 52
- Luapula River, l, 210
- Luawe River, 8, 11, 129, 267, 276, 288
- Lucky, Captain, Expedition, 121
- Luenda, 203
- Lunya River, 41, 42, 59, 82, 148, 284, 287
- Luia, Lucia, Luye, Lui, River, 66, 68, 71, 169, 204, 251, 294
- Lupata, xliii, 40, 41, 42, 44, 58, 74, 82, 86, 107, 108, 109, 116, 151, 174, 175, 195, 286, 328
- Lupata Hills, 148, 161, 286, 310
- Lynx, H.M.S., liv, 45, 46, 47, 48, 54, 103, 125, 127, 131, 135, 137 ff., 148, 156, 157, 283, 288 n 2, 289, 290, 291, 326, 331, 337, 350
- loses a boat's crew, 47-8, 290
- Lyra, H.M.S., xxxviii, xlv, 352
- Lyster, Captain, 4, 10, 266
- Lytton, Bulwer, 4 n 4
- MABELE RIVULET, 256
- Mabibele (Mazuite), 195

- McCormick, Mr, 2
- Mackenzie, Bishop, xxxv, xxxix, xlv, xlvii, 1, 179, 182, 183, 184, 189, 193, 213, 230, 242, 352, 360 n, 361, 364, 365 ff.
burns a village, 365, 409-10
death of, xlvii, 365, 366
seems to lean on his sisters, 213, 370
- Mackenzie, John, 367 and n 2
- Mackenzie, Miss, xvii-xviii, xlvii, 364, 365, 366, 367, 370, 371
- Maclean, Mr, 104
- Maclear, Cape, 194-5, 403-4
- Maclear, Mrs, 155
- Maclear, (Sir) Thomas, vii, xiii, xxi, xxiv, xxv, xxvi, xxix and n 2, xlix n 2, l n 2, li n 2, 126, 153, 247, 365, 368, 435
letters from D. L., 365-71, 385-7
- Maclear's Harbour, 211
- Macleod, Mr, 6
- Macnair, J., *Livingstone the Liberator*, x n
- Macnair, Rev. Dr James I., lv and n
- McWilliam, Dr James Ormiston, 288 and n 1
- Madagascar, xix, liii, 376
cat is shot, 20
ox, measurements of, 229 n
- Madeira, 1 n 1, 420
- Madras, 331
- Madumo, 228
- Mafundata Valley, 99
- Magomero, 184, 185, 186, 224
- Mahomet, Prince, 226
- Maindo, 21, 48, 49, 156, 158, 306
River, liii and n
- Maize, 39, 68, 71, 92, 98, 105, 123, 124, 175, 228, 231, 235, 255, 303
intoxicating fluid made from, 92
- Makanja, 76, 303
- Makapena, 94
- Makoka, village, 247
- Makololo, xiii, xiv, xvi, xx, xxii, xxiv, xxxi, xxxii, xl, xlii, xlv, 4 and n 3, 31, 47, 49, 60, 61, 62, 64, 65, 68, 69, 78, 82, 83, 87, 91, 92, 102, 103, 105, 106, 109, 112, 113, 116, 119, 120, 121, 122, 123, 126, 131, 135, 142, 146, 147, 148, 150, 159, 173, 176, 179, 183, 207, 210, 225, 229, 230, 236, 239, 259, 261, 262, 293, 294, 296, 297, 315, 319, 325, 335, 339, 352, 353, 354, 357, 359, 365, 366, 391, 392, 412, 415, 422
accused of plundering Manganja, 230
affected by the sea air, 131
afflicted with moon blindness, 287
are taught the Lord's Prayer and Creed, 83, 84
await D. L.'s return at Tette, 266, 271
cannot go on, 69-70
condole with missionaries, 236
country, 157, 298, 351, 356, 358, 387, 416, 424
country devastated by, 230
defended by D. L., 230 and n, 240-1
D. L.'s affection for, 353
desert, 164 ff., 249, 250
die of smallpox, 271, 287
establishment of friendly intercourse with, 415, 418
express anxiety at D. L.'s leaving, 241
form connections with slave women, 388
get into careless habits, 162-3
have decided preference for the English, 393
learn Portuguese, 144
mission to, 227 and n
nation perishing, 391
party abducted by an Arab, 258 and n 3, 261, 394
receive guns, 150, 170, 241 and n 3
return to their own country, 387
show signs of inebriation, 92
suffer much from hunger, 60
village, 231
wages paid to, 241 and n 3, 351
welcome D. L.'s return, 42, 287
wish to return, 82, 83, 296, 301, 389
- Makololuane, 8
- Makomatiti, 99 n 2
- Makombe Hill, 197
- Makonde, 219, 222, 373, 374, 375
- Makonka, 193
- Makusa, 203
- Makuza Hill, 207
- Malagasse, 216, 243
- Malane Mountain, 105
- Malangalanga, 246
- Malango, village, 191, 240
- Malaria, xiv, xxx, xlviii n 2, 73, 136, 167, 193, 298, 320, 336, 413, 420
moon has influence over, 287

- Malenje, 200
 Malenza, 208
 Malere Island, 194 *n* 2, 195, 197
 Malmesbury, Lord, liii, 28 *n*, 106, 114,
 126, 261, 379 *n*, 401
 D. L.'s letters to, 263 ff.
 Malo, village, 240
 Mambari, xiv, 259
 Mamboera Cataract, 92
 Mamdo, 9
 Mamire, 260, 262
 Mamvira, Mamvera, Cataract, 80, 81,
 188, 214, 301, 304
 Mamyeti, 260
 Manchester, xxv, xxvi, 126, 324, 326,
 357
 cloth, 285
 Manchoka Rivulet, 101
 Mandeville, Mr, 47, 290
 Manganja, 77, 78, 82, 87, 92, 94, 104,
 160, 184, 185, 186, 189, 190, 192
 and *n* 1, 193, 230, 237, 238, 239,
 246, 304, 317, 349, 359, 401, 410
 Ajawa urged to capture, 407
 beads fashionable among, 357
 chiefs, 246, 359
 country, 352, 358, 359
 described as exceedingly ferocious, 408
 dialects, 354, 359
 industry of, 318
 lose confidence in themselves, 240
 Mountains, 37, 76
 people described, 304, 318-9
 villages attacked, 401-2
 Mangaro, 58
 Mangaru, Lake, 95 and *n* 1
 Mango trees, 38, 73, 142, 147, 155, 159,
 193, 287
 superstition attached to, 155
 Manguru (Shuare), 92, 99
 Mountain, 106, 301, 304, 365
 Manica, 86, 107, 302
 Manikuso (Manikhosi), 104, 160
 Mankambira, 204, 206, 207
 Mankokue, Mankokwe, 94, 107, 124,
 180 ff., 188, 236, 242, 247
 Mankokue's, 187, 188, 228, 236
 Mansansue, 255
 Mantaka fly, 64
 Mantlanyane, 145, 162, 170
 Manuel, (Manoel) Sr, xliii, 16, 58-9,
 148, 234, 237
 Manyerere Hills, 174, 253
 Mapunda, 207
 Marabvi, 176
 Marambua, 96
 Maravi, 64, 72, 96, 189, 194, 317, 319
 Lake, 317
 Marenga, 195, 208, 406
 Marenje, 203, 256
 Mariano, Paul (a half-caste), 9, 11, 30,
 35, 48, 49-50, 75, 87, 88, 104, 121,
 141, 146, 163, 177, 228, 303
 in favour with the Governor, 121
 is liberated, 117
 rebellion of, 9, 46
 sentenced to imprisonment, 87, 349
 stockade described, 49-50, 104
 stockade destroyed, 44, 88, 289
 under arrest, 144-5, 284
 Marimba, 198
 Marimwe, 240
 Marinheiros, smallpox among, 135
 Marjoribanks, Mr, 153
MaRobert (Launch), xxviii, xxxi, liii, 8 f.,
 10, 12, 15, 17, 18, 19, 21, 22, 23,
 24, 25, 29, 30, 32, 34, 37, 42, 44,
 49, 56, 57, 59, 60, 62, 81, 86, 88,
 92, 129, 162, 175, 184, 266-7,
 268, 269, 270, 271 and *n* 2, 273,
 276, 277, 278, 280, 281, 283, 284,
 288, 290, 300, 302, 336, 337, 346,
 413, 414, 415, 421
 a source of constant worry and anxiety,
 333-4
 assembling of, 7, 418
 in bad shape, 120, 122-3, 128, 139,
 140, 147, 148-9, 151, 156, 157,
 159, 175-6, 279, 324-5, 333-4
 narrowly escapes wreck, 81, 124
 repairs to, 135, 138, 139, 140, 141,
 154, 161
 report on unseaworthiness, 120
 shortcomings of, xxxiv, 37, 122, 298,
 314, 329, 330
 sinking of, xlv
 specifications of, xxviii, xxxiv
 voyages of, 80
 Marques, Captain Lourenço, xvi
 Maruku, xl
 Maruru, 15, 32, 48, 103, 121, 159
 hostile reception at, 15-16
 Masache, 53, 75
 Masakasa (the Makololo), 68, 83, 253

- Masala, 100
 Masauka, liv
 Masega, 207
 Masenda, 106
 Mashirika Rock, 41
 Mashitabsiwe, 65
 Mashotwane (Moshobotwane), 258-9
 and *n*
 Masianyumbo, Mount, 70
 Masiko, 231, 237
 Masimbi, 99
 Massangano, 407
 Matabele, xiv, 98, 108, 261
 Mission, 227 *n*
Matabele Mission, The, x *n*, 227 *n*
 Matengo, 47, 49, 54, 104, 123, 165
 is punished for his misdeeds, 124-5
 Matete, 207
 Matianyane, 125
 Matiti, Cataract, 95
 village, 188
 Matope, village, lii, 192
 Matora, village, 99 and *n* 2
 Matude, village, 101
 Matundu Range, *see* Manganja Mountains
 Mauritius, xxii, 141, 226
 Mavuzi River, 173
 Mawewe, 160
 May, D. J., 180, 188, 308-9, 370, 371, 377
 Mayotta, 216
 Mazaro (Mzaro), 10, 15, 20, 21, 22, 40, 45, 57, 103, 117, 121, 141, 142, 144, 146, 152, 155, 156, 157, 227, 268, 269, 284, 327, 342, 350
 Mazitu, 203 ff., 405-6
 Mazoe River, 86
 Mbame's village, 182, 183, 187, 236, 248
 Mbia, 138, 152, 154, 155, 165, 175
 Mboma, 89, 105, 127
 village of, 105 and *n* 3, 123
 Mburuma, 163, 255, 398
 murdered by Portuguese traders, 399-400
 Medlicott (Medlycott), Mr, 45 ff., 290, 292, 297, 331
 Mehinga Mountain, 42
 Melalame, 48
 Melambe, 80, 101, 102, 103, 135, 151, 152
 Melanje (Mianje, Mlanje) Mountain, lii, 319, 320
 Melita, 4
 Meller, Dr, 180, 187 and *n* 2, 195, 229 *n*, 235
 a good amiable fellow, 368
 illness of, 235
 proposes to go away, 233
 rejoins the expedition, 376 and *n* 1
 Mello, 228, 229
 Menyemasso Island, 89
 Mersey River, xxix, xxx
 Mesage, 48
 Mesquita, 363 and *n*
 Mevunguti, 193
 Mfisi River, 61
 Miano oa Mambo, 106
 Michiru Mountain, 99
 Mikango Cataract, 96
 Miken, village, 213
 Mikoko, village, 183
 Mikuio, village, 247
 Milan, 128
 Milange, 106
 Milanje Mountains, 365, 366
 Milne, Thomas, 126
 Mindeza (Mindesa), 50, 51
 Minima (Midima), 96 and *n* 3
 Miranda, 35, 73
 Misango River, 101
 Mississippi River, 329
 Mitande, 185
 Moabve, 116
 Moachemba, village, 257
 Moamba Fall, 391, 397
 Moambura, village, 97, 98
 Moanche, 186
 Mobita, 230, 231, 241, 242
 Mochasaua, village, 245
 Mochikunde, village, 245
 Mochokotsi, 259
 Moela (Mucla) Lake, I, 210, 238
 Moembedzi Rivulet, 233
 Moenje Rivulet, 246, 248
 Moerunga, 51, 74, 75
 village of, 75
 Moffat, Emily (wife of J. S.), x, 227 *n*
 Moffat, John Smith, ix, xxxvi, xxxvi *n* 3, 3 and *n* 3, 126, 150
 proposes to renew mission to Makololo, 227 and *n*
 Moffat, Mary, *see* Livingstone, Mrs David

- Moffat, Mary (wife of Robert), xlviii n 2,
4, 221
Moffat, Mr M. P., 126
Moffat, Robert, xiv, xxxii, xlviii n 2, 4,
221, 266 and n, 354, 358, 367 and
n 2, 391, 396
death of, 227
his Sichuana version of the Scriptures,
367 n
letters from D. L., 221-2
Mofu, Lake, 1
Mofunda Falls, 240
Mogojos, *see* Moors
Mohilla, 216, 220, 226, 376
Mokakale, 246
Mokolongue, village, 245
Mokomo, 248
Mokompa, 259
Mokubula River, 95, 245
Mokurumadzi River, 96, 238, 239, 241
Mola Islet, 90 and n 4
Molakalala, 192
Molamba, 199, 210
Moloka, 205, 206, 230, 231, 236, 241,
242
Molomo a nko ku Range, 195 and n 1
Molompi tree, 141, 142, 154
Molumbua (Morumboa, Morumbua)
Falls, 70, 71
Momacla, village, 97
Mombame's village, 246
Mombare, 246
Mombezi, 246
Monantsane, 257, 260, 261
Monasomba's, 230
Monasombo, 242
Moneno, 100
Mongaze, 183, 186, 192, 248
Mongaze's village, 246
Mongue, Mount, 169
Monk, Rev. W., xxix, 153
Monomotapa, 61
Monrovia, 3
Monta River, xli
Moors, 49, 200
Mopane, 191
Morabvi, 108
Morambala Mountain, 45, 50-1, 53, 55,
74-6, 81, 88, 104, 106, 122, 127,
286, 303, 305, 310 and n, 317, 382
description of, 74-5, 242
description of the hot fountain, 50, 75
Morewa Cataract, 191, 213
Moringeira tree, 41
Morôe, 203
Morongocha, liv
Morongoga, Morongoge River, xli, 86
Morongoze River, 114, 247
Mororo, 321
Morungwe, 186
Mosambique, xxiv, xxv, liii, 6, 9, 30, 41,
44, 48, 62, 72, 95, 103, 109, 110,
111, 114, 116, 117, 122, 141, 145,
158, 161, 167, 177, 220, 229, 250,
284, 302, 317, 334, 339, 349, 375,
382, 384, 385
Almanac of, 162
Channel, 214, 307
cholera raging at, 107
Governor General of, 87, 107, 110,
117, 121, 156, 289, 302, 324, 348,
349, 369, 384
Vocabulary of the Languages of, 354,
416, 424
Mosambwe, 206
Mosanya tree, 41
Mosauka's, 193
Moshenamua plant, 64
Mosi-oa-tunya, *see* Victoria Falls
Mosilikatse, xiv, 4, 104, 176, 261, 391,
395, 397, 399
Mosiri, 209
Mosiriri, 141
Mosquitoes, xli, 50-1, 53, 88, 89, 123,
124, 134-5, 154, 155, 156, 193,
198, 354, 403
Motambo Rivulet, 100
Motaonyere tree, 71
Motengaziko, 193
Motenina, 254
Motondo tree, 72, 253
Motopue, 192
Motora land, 192
Motumba, 173
Motunta Rivulet, 256
Moyara, 257-8
Mozima's village, 76, 104
women described, 76
Mozingwa Island, 254
Mpakane, 98, 395
Mpande's, 195
Mparira Island, 256, 258, 259
Mpemba, 182, 187, 239, 241, 245, 246,
248

- Mpende, 254
 Mphalabe Cataract, 191
 Mphambe, 203
 Mpimbe, village, 240
 Mponda Mount, 247
 Mpoto, 207
 Mpuapua tree, 72
 Mpuie Rivulet, 259
 Mpure River, 259
 Mpzene, 195
 Mreta, 89
 Mtemua, 254
 Mterro, 57
 Muata Gazembe, 30
 Muata Manga, 101, 184, 247
 Muatizi River, xl
 Muave, 100
 Mucunducundu tree, 41, 51
 Mukanda Rivulet, 101
 Mukurumadze River, 189
 Mules, 231, 232, 235, 237, 238, 249, 358
 Mumailea's mother, 191
 Mumbo Island, 194 n 2, 195, 211
 Murchison, Lady, xxv, 374, 379
 Murchison Rapids, xlv, xlviii, xlix n 1, 125, 224, 301, 332, 353, 373, 378, 386, 403
 Murchison, Sir Roderick Impey, vii, xviii, xxi, xxii, xxiii and n, xxvi, xxvii, xxxvi, xlv, xlv n 3 and 4, xlviii and n 2, lii, 104, 126, 149, 153, 177 n, 271, 301, 337, 432
 Letter of Instruction to Thornton, 429-30
 letters from D. L., 371-4, 377-9
 Murongue's, 184
 Murray, Mungo, x, 126, 131
 Murumbua Cataract, 170, 173, 175, 252, 389, 399
 description of, 296-7
 Musindi Hill, 191
 Mutoga, 86
 Mutu River, 16, 21, 269

 NAKUNDE, 246
 Namawawe River, 101
 Namibia Range, 193
 Nambos, 186
 Nambowe, village, 259
 Namishongo River, 101
 Namopiri Rivulet, 245
 Napamba Rivulet, 246
 Nasinjere Rivulet, 174
 Natal, 104, 119, 141, 150, 164, 221, 307, 326, 337, 340, 346
 Native(s)
 are given rum, 16
 attacked by lions, 107
 attacks by, 207, 218, 222, 372, 375, 402-3
 awful laziness of, 285
 beliefs and superstitions of, 63, 64, 65, 82, 92, 155, 168-9, 174, 226, 251, 392
 Charles Livingstone instructed to photograph better class of, 431
 consumption of beer, 335
 deception of, 105
 description of, 92, 94, 95-6, 195, 196, 201
 do not know that coal burns, 390
 dress, 186, 189, 196, 201, 203, 208, 221, 318, 390, 404
 fever among, 309
 food, 171, 172, 201-2
 game law, 302
 hairdressing fashion, 79, 199 n 1, 390
 importance of moral influence on minds of, 415-6, 419, 422
 industry, 170, 197, 199, 203, 208, 219, 295, 318, 373, 375, 390, 414, 418, 420
 languages, xi, xxi, xxix, liv, 1, 74, 83 n 3, 105, 161, 164, 180 n 2, 218, 223, 304, 352, 354
 longing for presence of superior power, 307-8
 manners and customs, 81, 87, 93, 94, 103, 156 n, 171, 229, 255, 304, 319
 passion for barter, 300
 skins more sluggish in function, 205-6
 Nautical Almanac, 26, 27, 144
 Nautilus, 7 n 2
 Nazundo Rivulet, 95
 Ncharoto, 245
 Nchedze Mountain, 100
 Nchumoke Rivulet, 240
 Ndonde, 373
 Negro, Cape, 3
 New York G. and S. Society, 83
 Newcastle, Duke of, 4 n 4
 Newstead Abbey, xlv
 Newton, Dr, 104

- Ngami, Lake, xiii and *n*, xxx, 214, 226, 360
 Ngamiland, xxxviii
 Ngonye maggot, 64
 Nguengue, 56, 108
 Ngugu, Ngogo, 101, 247 and *n* 1
 Niger Expedition, 2 *n* 1, 140, 270, 274, 288 and *n* 1, 310, 327, 388, 393, 420
 Medical History of the, 288 and *n* 1, 393
 Niger River, xxviii, 122, 322, 331, 342, 345
 Nile River, 328, 332
 Nkalamba, 207
 Nkisi (Kisi) Island, 92
 Nkomba, village, 169
 Nkuesa, 37, 55, 117
 Notokola, 184
 Nsambo's, 186
 Nsinga, 209
 Nsumbo, 183
 Ntache, 92
 Ntendere Kanyanyezi Rivulet, 186
 Ntundo (Ntunda), headman, 240
 NTondo, 247
 Nuano Mambo, 35
 Nunes, Colonel, xxii, 6, 25, 26, 28, 32, 45, 236, 274, 289, 351
 Nunes, José M., xvii *n* 1, xxii and *n* 2, 142, 144, 146, 164
 letters from D. L., 362-4
 Nunkue, xv
 Nyadumba's village, 254
 Nyaguma Island, 44
 Nyakapiriri Hill, 67
 Nyakasenna Island, 38, 39, 56, 108, 148, 151, 161, 176
 Nyakuma, 48
 Nyalgalue, 138
 Nyamakombi Hill, 70, 71
 Nyamakusa Island, 161
 Nyamarusa, 89
 Nyamatarara Rivulet, 174-5
 Nyamatobsi Island, 37
 Nyambuc, 250
 Nyamolongo Hill, 41
 Nyamotoksi Island, 44
 Nyamvuru Hill, 241
 Nyande, *see* Bonga
 Nyanga Shirua (Chirua), 100, 101
 Nyangalue Island, 179
 Nyangalue River, 46, 47, 102
 Nyangkunde, 186
 Nyango, 247
 Nyangoma, 36
 Nyanja Lake, 195, 300, 305, 315, 339
 Nyanja River, 37, 91, 92
 Nyankangana Rock, 42
 Nyankokue's village, 91
 Nyankome Rocks, 42
 Nyansinga, 65
 Nyanzda Island, 40
 Nyaondue, 166
 Nyaotetezi Hill, 66
 Nyaruka, 36, 53, 81, 88, 148, 160
 Nyasa (Nyassa) Lake, xxxv, xlv, xlvii, 1, lii, liv, 125, 130, 150, 171, 172, 179, 192, 193 ff., 210, 213, 215, 218-9, 220, 222, 223, 225, 315, 334, 337, 338, 343, 344, 349, 371, 374, 375, 386, 401, 408
 centre of slavery, 222, 373, 375, 376
 description of, 403-7
 discovery of, 336
 D. L., reported killed at, 384
 establishment of English trade on, 374
 suggestions for developing lawful trade of, 347
 trip, account of laid before the Queen, 377
 Nyasaland, li, lii
 Nyavokusa Hill, 66
 Nyika Island, *see* Expedition Island
 Nyinyesi Lake, 102, 249, 315, 317, 321 and *n* 4, 325, 332, 333
 Nyongo, 90
- OBSERVATIONS, METEOROLOGICAL AND MAGNETIC, xiii, liii, 36 and *n* 1, 50, 59, 74, 81, 89, 90, 91, 97, 108, 125, 127, 144, 161 *n* 1, 162, 191 *n*, 213, 247, 256, 260, 280, 299, 321 and *n* 6, 335, 356, 368, 417, 431, 435
 Oldfield, R. A. K., 2 and *n* 1, 352, 370
 Olindi, 49, 158
 Ord, Dr, 9, 17
 Orestes, H.M.S., 217, 225, 383, 384
 Orpen, 153
 Orumba Hill, 247
 Oswell, Cotton, x, 104, 126
 Owen, Commodore, 388
 Owen, Professor, liv, 6, 104, 119, 153, 257, 299, 326

- Instructions to the Zoologist, 422, 427-8
- Oxen, 231, 233, 237, 242, 376
- Oxford, Bishop of, 104, 126, 160
and Cambridge Mission, *see* Universities Mission
- PACHANKONDO, 201
- Pachibebe, village, 168, 251
- Pachisi River, 99
- Paguruguru Ravine, 172
- Pajodzi, 71, 173, 295
- Pakamera, 248
- Pakampinga Cataract, 321
- Pakapimbe, 172
- Pakenham, Sir R., 114
- Pakomakabozue, 256
- Palm tree, 203
- Palmas, Cape, 3
- Palmerston, Lady, lii
- Palmerston, Lord, 104, 126, 134, 225
- Palmyra tree, 39, 75-6, 78, 79, 91, 104, 121, 131, 156, 195
- Palombe River, 316
- Pamalombe Lakelet, lv, 193, 194, 403
- Pamarisa Hill, 173
- Pamofunda (Pamozina) Falls, 191, 213, 240
- Pampadza Rapid, 191
- Pampatamanga Fall, 96, 189-90, 214
- Pampope, 211
- Pananyanje, village, 195
- Panda Maboa Hill, 65, 72, 292, 293, 294
- Panda Mukua, 168, 251
- Pandakwaea, 190
- Pandanus, 9
- Pandanus village, 120
- Pandazi Rivulet, 67
- Pandora, 168, 169, 251, 254-5
- Pandwe Hill, 239
- Pangola, 255
- Pangombe, 167, 250
- Panzo, 166-7, 250
- Papembeje, 195
- Paris, 128
- Park, Mungo, Expedition, 121
son of, 206
- Parker, Captain, 16, 267, 269, 326, 327, 413
- Parker's Luabo, 9, 10, 267, 326
- Parker's Muselo, 11, 102
- Passorire Hill, 96, 190
- Patricio, Sr Ramualdo, 117
- Paulo, Sr, 48
- Pearce, illness of, 232
- Pearl*, S.S., xxix, xxx, xxxi, xxxiv, xxxvii, xliii, 1, 3, 4, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 117, 129-30, 132, 156, 263, 264, 266, 267, 268, 269, 272, 275, 276, 277, 278, 288, 290, 291, 413, 415, 418, 420, 431, 432, 434
absence of fever in crew of, 270, 310
sails from Liverpool, 1
- Pedra, José (Nyamatimbira), 67
- Pedro V, King, xxiv, li
- Pelele, *see* Lip rings
- Pennel, 239
- Persian*, H.M.S., 80, 119, 125, 325
- Persian Gulf, 224, 225, 376
- Peto, Sir Martin, 271
- Philadelphia, 104
- Philip, Dr John, x
- Pikila, guide, 240
- Pinda, 76
- Pindi Pass, 246
- Pingazi River, 159
- Pinkue (Moeu), 253, 254
- Pinza, Mount, 72
- Pioneer*, H.M.S., xxxv, xlv, xlvii, xlviii, xlix, li, 127 n, 214, 217, 220, 225, 226, 227, 228, 229, 231, 232, 308, 309, 362, 365, 371, 375, 376 n 1, 378, 381, 382, 383 and n, 384, 401, 406, 407, 409
found to be too deep, 401
life buoys stuffed with straw, 373
repairs to, 242
- Pita, 37, 82, 117, 151
- Playfair, Dr Lyon, 126
- Pluto*, xxvii
- Pomony Bay, 216
- Porgas, 1
- Port Elizabeth, xxviii, 5 n 4
- Porter, John Scott, 5 n 1
- Porter, William, 5 and n 1
- Portugal, xxiv, xxv, xxvi, xlv, li, 163, 241, 263
King of, 263, 266
Queen of, 67
- Portuguese, xii, xiv, xv, xvi, xvii n 1, xxv, xxxvii, xxxviii, xlii, xliii, xlix, liii, 7, 8, 9, 12, 15, 19, 20, 32, 34, 36, 38, 40, 41, 42, 43, 45, 50, 52, 54, 55,

- 61, 64, 67, 70, 75, 90, 95 *n* 3, 104, 106, 112, 113 and *n* 1, 114, 115, 117, 134, 136, 140, 144, 146, 149, 152-3, 155, 157, 159, 161, 162, 163, 166, 173, 174, 187, 215 and *n*, 219, 223, 224, 228, 249, 263, 264, 269, 271, 282, 285, 286, 289, 292, 294, 300, 302, 303, 304, 306, 307, 313, 317, 319, 325, 327, 334, 335, 336, 338, 339, 342, 343, 345, 346, 347, 350, 352, 359, 363, 369, 370, 378, 386, 387, 408, 410, 421, 431 and slave trade, 34, 49, 140, 158, 164, 169, 184, 185, 215, 270, 307, 323, 338, 340, 345, 349, 377, 378, 389, 401, 407
 anxious to introduce French colonists, 346, 348
 at war, 311-2, 340
 bullied by the French, 348
 custom house, 350
 dare not enter River Shiré, 318
 driven from their stations, 268
 expulsion of, 9, 10
 fever among, 309, 314
 fight battle with rebels, 152-3, 284
 forts, 263, 264, 384, 408-9
 Government, 62, 63, 106, 109, 112, 288, 289, 302, 322, 323, 339, 341, 345
 jealousy awakened, 322, 338
 laws, 171
 lowness of character of, 337, 378
 punishment for crimes, 49
 Royal Decree, 263
 syphilitic condition of, 162
 traders employ assassination as means of increasing power, 399-400
 treatment of natives, 106
 Pratt, 150
 Price, Mr, 258
 Prince Consort, xxvi, 378
 Prismatic compass, 26
 Procter (Proctor), Lovell, xxxix, 187 and *n* 2, 189, 227, 231, 234, 235, 236, 365, 369
 has no strength of character, 366
 hut burned, 239, 242
 illness of, 236, 237
 Propagation Society, 160
Punch, xlv and *n* 5, 146
 Pusey, Dr, 224
Quarterly Review, 126, 134
 Quilimane, xiv, xvi, xvii, xx, xxi, xxii *n* 2, xxix, xlix, li, liii, 9, 10, 24 ff., 28, 29, 44, 45, 49, 57, 63, 74, 79, 82, 85, 87, 101, 103, 107, 111, 134, 136, 146, 155, 156, 157-8, 159, 177 *n*, 192 *n* 1, 214, 227, 249, 266, 267, 268, 274, 290, 306, 319, 342, 345, 348, 349, 363
 D. L. appointed consul at, 264
 Governor of, 44-5, 51, 111-2, 139-140, 141, 144, 152-3, 163, 284, 288, 307, 323, 346, 350, 407
 River of, 224, 227, 342, 363
 slaves run away from, 233
 sugar-cane grows almost wild at, 287
 type of fever most frequent at, 312
 Quiloa (Kilwa), 219, 223 and *n*, 224, 373, 375
 Quinine, 6, 25, 26, 34, 39, 41, 43, 52, 73, 77, 79, 160, 176, 228, 232, 245, 261, 297, 310, 311, 366, 371, 393, 420, 424
 causes irritability, 154
 D. L.'s faith in, 271, 287-8
 prompt effect of, 73, 312
 taken regularly, 310, 312
 use of, abandoned, 313, 314
 Quitave, 82
 RAE, GEORGE, xxvii, xxxv, xxxviii, xlv, xlviii, l, li, 4, 17, 22, 23, 24, 34, 36, 37, 39, 43, 44, 46, 47, 60, 65, 82, 83, 85, 114, 116, 117, 119, 120, 122, 125, 126, 132, 133, 134, 144, 145, 146, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 159, 227, 231, 236, 238, 239, 241, 273, 274, 276, 277, 281, 293, 324, 325, 335, 336, 337, 363, 369, 375
 affirms Bedingfeld's conduct, 282
 illness of, 33, 84, 125, 134, 154, 219, 312, 320, 368
 leaves D. L., li, 387
 Letter of Instruction to, 418-9
 proceeds home, 157, 159
 returns, 363
 services of, no longer needed, 346-7
 takes quinine with unvarying regularity, 312
 Rains, 54, 55, 64, 72, 73, 77, 79, 81, 121, 141, 142, 144, 145, 146-7,

- 151, 152, 154, 160, 167, 177, 179,
181, 182, 184, 188, 189, 190, 191,
213, 224, 228, 234, 235, 237, 239,
252, 313
mostly from the north, 231
- Ramakukane, 231
- Randall, Mr, 153
- Rapid*, H.M.S., 227
- Rapozo, 166
- Rebels, 32, 34, 35, 45, 48, 104, 106, 134,
136, 269
engagement with, 152-3, 284
flee, 289
receive English with kindness, 284
- Rebubue, 86 *n* 1
- Red Sea, 224, 225, 376
- Reeder, Mr, 2
- Refu, Mount, 210
- Refumbue, Lake, 176
- Revebue River, 74
- Rhinoceros, 173, 174
- Rhodes, Cecil, xii
- Rhodesia and Nyasaland, Federation of,
vii
- Rich, Mr, 234
- Ripon, Earl of, *see* Goderick, Viscount
- Robinson, Frederick John, *see* Goderich,
Viscount
- Rofu River, 203, 204
- Rongue land, 192
- Roscher, Dr, 204, 208
- Ross, J. B., vii
- Rovuma Bay, 217
- Rovuma River, xxxv, xlviii, l, liv, 192 *n* 1,
195, 197, 200, 203-4, 206, 210-1,
214, 215, 216, 217 ff., 220, 221 ff.,
238, 308, 344, 352, 365, 370, 371,
377, 378, 380, 401, 408
account of voyage to, 217-20, 225,
371-4, 374-6
accurate survey examination of, 343
perplexing reports about, 404-5
tsetse met with all along, 373, 375
- Rowe, William, 47, 83, 86, 94, 109, 123,
124, 126, 127, 135, 141, 154, 162,
167, 168, 228, 251
illness of, 140, 154
recommended for advancement, 140,
339-40
- Rowley, Mr, 182, 187, 189, 229, 232,
233, 234, 366, 367
cowardice of, 187
- Royal Geographical Society, vii, xviii,
xxviii, xxxvii, xlv, 14 *n* 2, 150, 324,
329
- Royal Society, 299 and *n* 1, 321, 335,
348, 426
- Rundo, *see* Mankokue
- Ruo River, xlvii, 80, 124, 321, 365, 366
- Russell, Lord John, xlix and *n* 1, li, 175
n 1, 224, 241, 377
letters from D. L., 340 ff., 387 ff.
letters to D. L., 379-82
- Russell, Mr Scott, 153
- Rutherford, H. E., 150, 153
- SABINE, GENERAL SIR EDWARD, xxv, 299
and *n* 1
- Sakwenda, village, 169
- Salisbury, lv
- Sambo, 81, 106
- Sami, 199
- Sami Sani Hill, 210
- Sandia (headman), 68
- Sandile, xxviii
- Sangane, 98, 306
- Sangive's village, 195
- Saturday Review*, 134
excerpts from, 156 and *n*, 158
- Saumarez, Commander, 119
- Scudamore, Rev. H. C., xlvii and *n* 2,
187, 189, 225, 365, 366
illness and death of, xlvii and *n* 2
- Seangkata Hill, 191
- Seanzeba, 256
- Seaver, Very Rev. George, vii, lv
- Sebastian, Cape, 6
- Sebituane, xiii, xiv, 259
- Secard, Major Tito Augusto Aracijo,
xxxviii, 9, 30, 31, 32, 33, 34, 36,
40, 42, 43, 45, 59, 63, 72, 82, 86,
107, 109, 110, 112, 113, 114, 115,
117 and *n* 3, 118, 147, 182, 287,
289, 292, 294, 306, 329, 348, 350,
401
feels somewhat aggrieved, 302
generosity of, 289
is honoured, 323
letters from D. L., 109-10
- Sechele, xxix
- Sechuana tongue, lessons in, xii, 1, 161,
223, 354, 416, 424
- Secretary of State for Foreign Affairs, 27,
28, 340

- Sekeletu, xiv, xvii, xx, xxii, xlv, 40, 74, 82, 132, 162, 165, 167, 168, 210, 230, 258, 259, 261, 360, 376, 388, 389, 390 ff.
 afflicted with leprosy, 257, 260, 391
 answer to letter of H.M. Government, 392, 395-6
 receives medical attention, 260-1, 391, 393
 Sekote, 176
 Sekuangela (Nyalobilo), 174 and *n*, 253
 Sekweleu (Sekwebu), 42 and *n*
 Sekwenda, village, 251
 Sekwere, village, 95
 Senegal River, 1
 Senga, 61, 171
 Senna, xliii, xlv, 9, 10, 13, 31, 36, 44-5, 46, 51, 53, 54-5, 63, 74, 80, 81, 82, 85, 87, 88, 105, 106, 107, 108, 111, 112, 113, 117, 122, 125, 127, 145, 148, 151, 160, 176-7, 181, 183, 188, 192 *n* 1, 202, 229, 233, 236, 263, 268, 284, 285, 286, 289, 299, 300, 303, 304, 310, 315, 340, 345, 348, 351, 354, 398, 400, 414
 dictionary of dialect of, 161
 ivory brought to, 342
 suffering much from hunger, 144, 148
 Senre, 211
 Sequasha, *see* de St Anna, José
 Seroka, 259
 Sesheke, lv, 259, 261 and *n* 2, 387, 391, 395, 396
 Sextant, 26, 27, 31, 149, 213, 280
 Shaftesbury, Lord, xxii
 Shamo (Shamo), 49, 51, 104, 106, 122, 127, 210
 Shamoara (Shamoera), 35, 45, 49, 81, 117, 122, 147, 151, 159, 303
 Shangamira, 107
 Shashua River, 95
 Shibade Falls, 65, 72
 Shidima, 61, 293, 295 and *n*, 296
 Shigogo, 40, 56, 74, 328
 Shikanda, 88
 Shikandakazi, 106, 123
 Shikandza, 88
 Shileade, 72
 Shimadzi, 65, 72
 Shipanga, 108
 Shiperizioa, Shipirizioa, Shiperisioa, Shu-
 perisioa, Chiperiziwa, 67 and *n*, 294 and *n* 4
 Shiramba Dembe, 38, 44, 56, 82, 86 and *n* 3, 108, 117, 151, 160, 176, 328
 Shiré Falls, xlix
 Shiré River, xxxv, xxxvii, xli, xliii, xlv, xlvii, xlviii, xlix, l, lv, 9, 49, 50, 51, 53, 73, 74, 75-6, 80, 81, 86, 88, 89, 95 ff., 105, 107, 112, 117, 122, 125, 128, 131, 133, 142, 144, 146, 160, 164, 168, 171, 172, 177, 179, 180, 182, 183, 187, 188, 191, 192, 202, 214, 219, 227, 238, 241, 242, 246, 247, 249, 300, 302-5, 313, 322, 325, 332, 334, 336, 338, 343, 347, 349, 350, 353, 359, 363, 365, 369, 374, 376, 377, 378, 382, 386, 401, 403, 408, 409
 admirably adapted for steam navigation, 300, 342
 cataracts, 248, 249, 335, 344
 description of, 51, 52, 76, 159, 160, 315
 expedition, report on, 300, 302-5, 315 ff.
 source traced, 332
 Shiré Uplands, xxxv, xlv, liv, 324
 famine at, 227
 Shiré Valley, 101, 136, 247, 303, 304, 317, 319, 332-3, 407, 409
 Shirwa (Tamandua), Lake, xlv, l, 107, 124, 201, 246, 319 and *n* 3, 321, 332, 333, 334, 349
 described, 316
 discovery of, 315, 316 ff.
 high lands explored, 313
 Shoshong, 4
 Shuindo, 49
 Shungo, 207
 Shuōze Rock, 42
 Shupanga, xl, xlvii, xlviii *n* 2, 29, 30, 31, 32, 34, 36, 40, 44, 45, 48, 49, 54, 56, 57, 73, 80, 81, 83, 84, 89, 102, 103, 121, 128, 139, 140, 141, 142, 144, 148, 151, 152, 153, 159, 176, 177, 224, 231, 233, 280, 284, 286, 289, 307, 311, 312, 363, 364, 367, 368, 369
 House, 121
 is rented from the Zulus, 341
 Mary Livingstone dies at, xlviii
 men, 233, 235, 237, 239

- Sidon*, H.M.S., xlv
Sierra Leone, xxxii, 1 and π 5, 2-3, 119,
 206, 263, 274, 275, 322
 description of, 2
 Governor of, *see* Hill, Colonel Stephen
 John
Simbo, 10
Simon's Bay, xxxiii, 4, 5, 10, 110, 266
Simon's Town, xxxii
Sinamani's, 390, 397, 398
Sindabone, village, 251
Sindabue, Mount, 169, 170, 252
Sinde Rivulet, 257
Sindi Island, 119
Sininyane, 69, 83, 101
Sinje River, 95
Sintlupe Rivulet, 196
Sinyane, 89
Sirwa, 209
Sisya, 207
Skead, Lieutenant Francis, 5 and π 4, 6,
 7, 9, 12, 17, 21, 45, 129, 266, 267,
 275, 276, 280
Skead's Harbour, 267, 268
Skokumbenie, 68
Slave-stick, 98 and π 2
Slave trade, Slavery, xi, xiv, xvi, xxvi,
 xxix, xxx, xlv, xlviii, 1, li, liv, 34, 46,
 48-9, 63, 77, 84, 85, 86, 87, 93,
 95, 98, 99, 100, 104, 122, 139, 141,
 142, 143, 144 π 1, 157-8, 162, 168,
 172, 182 ff., 199, 200, 202, 204,
 207, 218, 219, 221, 223, 224, 227,
 233, 246, 248, 249, 251-2, 264,
 268, 283, 306-7, 318, 319, 323,
 326, 332, 334, 342, 345-6, 347,
 348-9, 352, 358, 362, 369, 373,
 382, 384, 388-9, 392, 394, 401,
 404, 405, 406, 407, 408, 415, 421
 and the Portuguese, 34, 49, 140, 158,
 164, 169, 184, 185, 209
 calamities of the Missionaries ascribed
 to slave-hunting, 234
 country devastated by, 230
 depopulates lower Zambezi lands, 345
 effects of cultivation of cotton and
 sugar-cane on, 53, 283, 359, 410,
 413, 418
 efforts to curtail, 224, 225, 374, 376,
 378, 380
 English opposed to, 269, 307, 358
 half-caste Arabs engage in, 375
 liberation of slaves, 182 ff.
 prices paid for slaves, 248, 402
 to Brazil, 340
 Slavers, armed clash with, xlvii
 Smallpox, 42, 43, 59, 64, 135, 259, 271
 Smith, Dr Andrew, 104
 Soche, Mount, 183, 185, 189, 245, 246,
 248
 Soche's, 187
 Sofala, 345, 405
 Sokuru River, 76
 Solomon, ophir of, 41
 Sombane River, 316
 Somerset, Duke and Duchess of, lii
 Somerset, Major-General, xxviii
 Soni, 74
 Southampton, 153
 Speke, xvii π 1, xxiii, 347, 350
 St Anna, José Anselmo de, 63, 86, 122,
 163, 170
 chief agent in an assassination, 399-400
 joins the expedition, 294
 St Augustine's Bay, xix
 St John River, 5
 Standard Chronometer, liii
 Steele, Thomas, x, 104
 Stephanie (Surua), Mount, 67, 68, 69,
 169, 170, 251, 252, 294, 295
 Stephanie, Queen, 128, 294
 Stephen, Sir James, liv
 Stewart, Rev. James, xxxvi, xxxvii,
 xxxix, xlv π 3, xlvii, xlviii, 226-7,
 367, 368
 pays for his mess, 371
Zambesi Journal of James Stewart,
 xxvi and π , xlv π 3, xlviii and π 1
 Suez, lii, 144
 Sugar, sugar-growing, 133, 141, 150,
 151, 156, 162, 170, 171, 217, 252,
 287, 303, 304, 305, 307, 348, 377,
 415, 422, 426
 making of, 217 and π , 198
 Sugar mill, 82, 83, 150, 159, 348
 Sunley, Mr, li, 216-7, 387
 Swamps, xxiii, xxx, xxxi, 2, 7, 52, 76, 79,
 80, 88, 134, 288, 309-10, 313, 389
 TABA-CHEU, *see* CHIREBUE, MOUNT
 Table Bay, 4
 Table Mountain, xxi, 332
 Tamanda, 183, 247
 Tamarind trees, 38, 57, 174, 236, 287

- Tambala, village, 99, 125
 Tambumbu River, 245, 248
 Tanaja, Lake, 203
 Tangalane River, 11
 Tanganyika, Lake, 1, 210, 238
 Tapembeje, village, 195
 Tattooing, 101, 196, 201, 319
 Taylor, W., 126
 Tedzane Cataract, 190-1
 Teneriffe, 1 # 2
 Terero, *see* Mello
 Terrazão, Sr, 163, 237
 Testimonials, vii, 4
 Tete (Tette), xv, xvii, xxv, xxix, xxxi, xxxiv, xxxvi, xxxvii, xxxix, xl, xli, xlii, xliii, xlv, xlvi, liii, liv, 4 and # 3, 9, 10, 13, 17, 19, 22, 31, 34, 37, 40, 41, 42-3, 45, 48, 55, 57, 58, 59, 62, 63, 65, 72, 73, 74, 78, 80, 81 ff., 93, 103, 105, 109, 110, 112, 114, 115, 116, 117 and # 3, 120, 122, 126, 132 and # 1, 134, 136, 138, 139, 144, 148-9, 150-1, 152, 153, 155, 161, 162, 164, 166, 167, 168, 170, 171, 173, 174, 175, 177 and #, 181, 182, 183, 184, 189, 192, 229, 232, 234, 237, 238, 249, 254, 266, 270, 279, 283, 285, 286, 292, 296, 299, 301, 302, 304, 311, 313, 317, 321, 323, 324, 325, 327, 328, 336, 338, 339, 340, 342, 345, 348, 351, 354, 360, 363, 365, 368, 388, 392, 398, 399, 400, 401-2, 412, 414, 415, 420, 421, 429, 431, 433, 435
 Cataract, 213
 Commandant of, 268, 338, 341
 dictionary of dialect of, 161
 episode of life at, 163
 Government of, 302
 Governor of, 85, 86, 163, 182, 183, 215, 229, 235, 345, 369
 great hunger prevails at, 102, 105, 157
 indigo growing as weed in streets of, 307
 inhabitants see steamer for first time, 42
 ivory brought to, 342
 Makololo await D. L.'s return at, 266, 271, 287
 Makololo return from, 387
 people, 252, 287
 Portuguese established at, 263
 rocks, 254
 sugar manufactured at, 287
 Tette Chenshe fly, 64
 Tette, village, 95, 96, 188, 214
 Tewarewe, 10
The Times, 126, 145, 283
 Theodolite, 149, 164
 Thermometers, 59, 62, 89, 94, 260, 333
 Thirwell, 156 #
 Thornton, George, 237
 Thornton, Richard, xxvii, xxxvi-xxxvii, xxxix, lv, 4, 15, 26, 29, 34, 45, 50, 54, 65, 68, 82, 83, 84, 85, 86, 113-114, 115, 116, 126, 132, 149, 151, 164, 229, 231, 234, 237, 269, 273, 274, 280, 286 # 2, 289 # 4, 370
 affirms Bedingfeld's conduct, 278 # 2, 279-80, 282
 death and burial of, 232-3
 description of, xxxvi
 disinclined to geologize, 85, 109, 112, 149, 150, 338
 dismissal of, 113, 149
 D. L.'s Letter of Instruction to, 432-3
 D. L.'s opinion of, 136, 235, 337-8
 finds coal, 74, 86, 298
 hopes to discover silver mine, 151, 157
 illness of, xl-xli, 62, 66, 84, 113, 115, 150, 161-2, 232, 302, 320
 joins himself to the Portuguese, 149
 lays charges against D. L., 177 #
 letters from D. L., 112-13, 149, 177
 letters of, xxxix-xliii, 177-8 #, 279-80
 offered a passage home, 149
 on board again, 164
 Roderick I. Murchison's Letter of Instruction to, 429-30
 salary stopped, 113, 177, 325, 338
 unfavourable report of, 325
 wishes to be invalided, 115, 150, 338
 Thubamokhorro, 83
 Thuka, 88
 Tidman, Rev. A., xvi, liii
 Timbwe (Timbue, Muselo) River, 10, 11, 48, 102, 156, 268
 Tinde, Mount, 206
 Tingane, 77, 90, 94, 123
 reported death of, 228
 Tingane's, 90
 Tito, Sr, xl, xlii, 59, 62, 65, 87, 132, 140, 150, 152, 159, 162, 166, 167, 168, 169, 182, 229, 234, 250, 252, 259
 Tizora (pilot), 48, 145

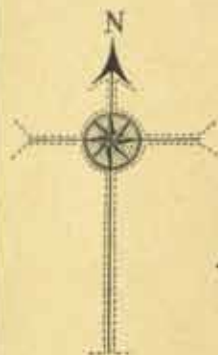
- Tobacco, 76, 77, 105, 121, 124, 260,
303, 304
- Toby, Tom,
saved from drowning, 35
- Tod, William, 153
- Tondo Hill, 206 *n*
- Tonje Cadja (native cotton), 39, 61, 71,
127, 285
- Tonje Manga, 285
- Tozer, Bishop, xlix, li, 241-2, 382-3, 386
character of, 241
welcomed by D. L., 241
- Traders, 42, 63, 69, 91, 94, 141, 166,
176, 199, 260, 304, 305, 317, 333,
334, 338, 358
large payments extracted from, 295,
341, 373
Portuguese, murderous activities of,
399-400
- Trotter, Admiral, 264
- Tsanganu, 239, 240
- Tsenga, 211
- Tsenga's Mountains, 197, 201
- Tsetse fly, xx, xxx, 4 *n* 5, 62, 66, 161,
172, 173, 174, 219, 223, 256, 257,
358, 373, 375
Instructions to the Zoologist concern-
ing, 427-8
Moyara's remedy for, 257-8
- Turner, A., 126
- Typhoid, 232
- UKUSO HILL, 204
- Umbidi River, 101
- Undu, 171-2
- Unguesi River, 257
- Universities Mission, xxvi, xxx, xxxvii,
158 *n*, 213, 215, 227, 231, 235,
236, 237, 369, 376 *n* 2, 378, 381,
401, 407, 409
allow themselves to be caught up in
native feuds, 1, 230, 409
announcement of likelihood of, xlvii,
160, 350, 361
D. L.'s letter to secretaries of, 351-61
expedition delayed by, 371
letters indicate starvation, 367 and
n 3
members described, 189
new members arrive, xlvii
- Unkata, 193
- Utale, village, 96
- VALLE, Mr, 19-20
- Vardon, Frank, x, 104, 126, 370
- Vavasseur, 153
- Venereal disease, 84, 104, 136, 140
- Venn, Rev. W., 104, 126
- Vianna, 228
- Victoria Falls (Mosi-oa-tunya), vii, xiv,
xxxviii, 257 and *n*, 258, 353, 360,
387, 390
D. L. goes to see, 258 and *n*, 391
described, 396-7
discovery of, xiv
prodigious numbers of animals in
region of, 399
- Victoria, Queen, xxii, xxvi, 90, 109, 167,
224, 262, 309 *n*, 377
- Vienna, Sr, 48, 49, 54, 103, 104, 105,
117, 121, 144, 145, 146, 159, 177,
364
- Villa da Flor, 30, 32, 288
- Villa Nova, 60
- Villiers, George William Frederick, *see*
Clarendon, Earl of
- WALKER, JOHN, 47, 64, 88, 94, 105, 109,
313, 320
invalided, 119, 325
wishes to retire, 114, 325
- Waller, Mr, 189, 228, 230, 236, 237,
238
accuses the Makololo of plundering,
230
aided by Makololo, 242
comes to visit, 242
dreadfully seasick, 383
shews inclination to retire, 366
- Wallis, Professor, J. P. R., vii
Thomas Baines of King's Lynn, xxxviii
n 2
- War, 30, 45, 46, 51, 92, 196, 215, 277,
289, 300, 312, 340-1, 410
country depopulated by, 39, 287, 307
- Warrington, Captain, 275
- Washington, Captain John (later Rear-
Admiral), xxiii, xxvii, xxviii, xlvii,
14 and *n* 2, 104, 126, 153, 234,
271, 344, 357, 370, 371
- Webb, Mr and Mrs, xlv
- Webb, William, x
- Wellington, Duke of, 126
- Welweitch, Dr, 308
- Wesleyans, 2

- Whateley, Archbishop, 126
 Whately, Miss, 83
 Whewell, Professor, 126
 Whiskey fever, 2
 Whitby, xix
 Wien K.K. geographischen Gesellschaft, 83
 Wilberforce, Bishop, xlv
 Will, Tom, 44, 47
 Williams, 39
 Wilson, Captain, xlvii, 64, 224, 230, 364, 366, 367
 barely survives a grisly journey, xlvii
 illness of, 73, 235
 Wilson, Dr Hubert F., vii, lv
 Wilson, George, 153
 Wilson, James, 104, 126
 Wilson, Professor, 126
 Windsor, xxvi
 Wisconsin, 153
 Wodehouse, Governor, 382

 YOUNG, JAMES, xlv and *n* 1, 120, 126, 131, 153, 155
 Young, Mr, 231, 232, 235,
 illness of, 231

 ZACHARIAH, 231
 illness of, 232
 Zamba's, 240-1
 Zambezi (Zambesi) River, vii, xii, xiv, xv, xvi, xxv, xxvi, xxviii, xxix, xxx, xxxi, xxxii, xxxiii, xxxv, xxxvii, xxxviii, xlii, xlv, l, li, liii, 4, 5 *n* 4, 9, 10, 11, 12, 16, 17, 19, 20, 29, 30, 40, 42, 51, 52, 61, 64, 66, 68, 69, 83, 88, 89, 95 *n* 3, 109, 114, 115, 117, 128, 139, 141, 156, 157, 160, 169, 171, 174, 176, 179, 192 *n* 1, 195, 202, 216, 217, 218, 219, 220, 221, 227, 230, 249, 253, 256, 266, 272, 275, 276, 278, 290, 292, 293, 294, 295, 300, 301, 303, 305, 306, 313, 314, 315, 322, 323, 334, 336, 342, 345, 346, 347, 348, 359, 372, 373, 374, 377, 380, 388, 389, 390, 396, 397, 399, 412, 413, 420, 421, 433
 application for a proper steamer for, 343
 capabilities of, for commercial purposes, 20-1, 267, 270-1, 291, 326-31
 coal-fields on, 390
 desire to establish free trade in goods on, 415
 export of slaves from, 407
 freedom of navigation on, 341, 345, 347, 352
 infested with tsetse, 358, 427
 its water described, 52, 303
 Kwelles the greatest difficulty in navigation of, 331
 like an inland sea, 301
 like the Thames at London Bridge, 398
 Lower, African fever in, 309-14
 main direct channel crossed and sounded, 291
 measurements of, 83, 286, 328
 report on the navigation of, 115, 324, 326-31, 339, 340 ff.
 valley, inhabitants of, 390
 waves on, 298
 Zambezia, xxxvii, 263
 Governor of, 87
 Zambo Mountains, 194
 Zamgue River, 8
 Zanangua Rivulet, 65
 Zandia, 69, 71, 171-2, 295
 Zandia's village, 170, 252
 Zanzibar, xxxvii, 138, 177 *n*, 210, 221, 234, 301 *n*, 342, 375, 384, 385, 387, 392, 394
 Sultan of, 224, 408
 Zebras, 173, 174, 189, 254, 256
 Zedi Pass, 246, 248
 Ziba Rivulet, 170, 252
 Zimika Hills, 72
 Zingesi, 254
 Zinjambene, 92
 Zomba, Mount, lv, 99, 125, 182, 183, 185, 187, 213, 247, 248, 256, 316 and *n*, 317, 320, 332-3, 409
 Zomba-a-Mojan, 101
 Zombue, 172
 Zouga River, *see* Botletle River
 Zulus, 82, 104, 195, 198, 340, 341, 342, 405
 Zumbo, xiv, xliii, 30, 61, 132, 149, 155, 163, 172, 255, 338, 387, 399, 400
 fortress of, 263, 341



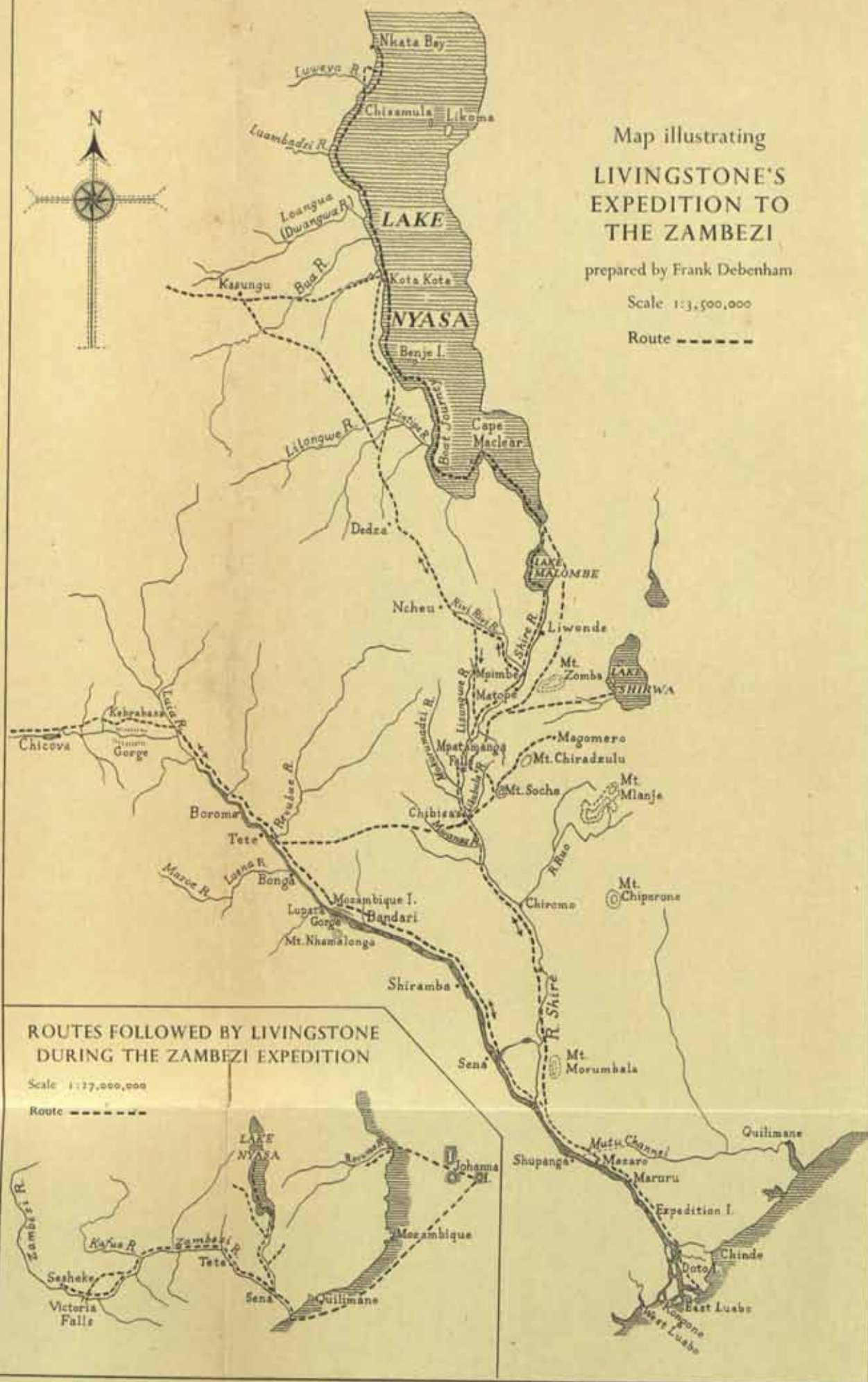


Map illustrating
LIVINGSTONE'S
EXPEDITION TO
THE ZAMBEZI

prepared by Frank Debenham

Scale 1:3,500,000

Route - - - - -



ROUTES FOLLOWED BY LIVINGSTONE
DURING THE ZAMBEZI EXPEDITION

Scale 1:17,000,000

Route - - - - -

2

CENTRAL ARCHAEOLOGICAL LIBRARY,
NEW DELHI
Borrowers record.

Catalogue No. 910.4096/Liv/Wal-
4589

Author—Livingstone, David.

Title—Zambezi expedition (1858-
1863). Vol. 2.

Borrower No.

Date of Issue

Date of Return

"A book that is shut is but a block"

CENTRAL ARCHAEOLOGICAL LIBRARY
GOVT. OF INDIA
Department of Archaeology
NEW DELHI.

Please help us to keep the book
clean and moving.